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ABSTRACT

Leaders from across the country attended the Fourth Annual National Vocational-Technical Teacher Education seminar, which focused on emerging teacher education curricular models. The November 1970 seminar had three primary objectives: (1) to provide an understanding of the performance-based core concept of a model vocational-technical teacher education curriculum, (2) to focus on an understanding of the administrator's role in implementing a core-based vocational-technical education curriculum, and (3) to foster an understanding of the teacher educator's role in implementing vocational-technical teacher education curriculum improvements. This seminar report contains presentations of over 20 national leaders in teacher education, and includes many of the findings of a 3-year research project conducted at The Center for Vocational and Technical Education on performance-based model curriculums and core concepts for organizing and providing professional offerings. It should be useful to those interested in modifying teacher education curriculums and in developing new models for teacher education. (CD)

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THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY

EMERGING TEACHER EDUCATION CURRICULAR MODELS

Fourth Annual National

Vocational-Technical Teacher Education

Seminar Proceedings

November 1-4, 1970

VT 012 696

Leadership Training Series No. 33

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U. S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Resources Information Center located in the U. S. Office of Education.

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Leadership Training Series No. 33

EMERGING TEACHER EDUCATION CURRICULAR MODELS

FOURTH ANNUAL NATIONAL VOCATIONAL-TECHNICAL TEACHER EDUCATION SEMINAR

PROCEEDINGS

NOVEMBER 1 THROUGH 4, 1970
ST. LOUIS, MISSOURI

Edited By

Edward T. Ferguson

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U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
Bureau of Research

Preface

The Fourth Annual National Vocational-Technical Teacher Education Seminar attracted leaders from 46 states, the District of Columbia and Puerto Rico. This year's annual seminar theme focused on emerging teacher education curricular models.

The objectives of the seminar, held in St. Louis on November 1-4, 1970, were to: 1) provide an understanding of the performance-based core concept of a model vocational-technical teacher education curriculum, 2) focus on an understanding of the administrator's role in implementing a core-based vocational-technical education curriculum, and 3) foster an understanding of the teacher educator's role in implementing vocational-technical teacher education curriculum improvements.

Recognizing the tremendous leverage inherent in improved teacher education and the centrality of teacher education curriculum, The Center has been conducting a research project for the past three years on performance-based model curricula and core concepts for organizing and providing professional offerings. We believed the seminar would be an efficient and effective way to disseminate the findings of The Center's research project and to secure reactions and inputs.

The seminar report contains the presentations of over 20 national leaders in teacher education. It should provide vital information for individuals interested in modifying teacher education curriculum and in developing new models for teacher education. The seminar proceedings and the forthcoming research report will provide a data base and perspective for future developments in this area.

Recognition is due the co-chairmen of the seminar, Edward T. Ferguson, Jr. and Anna M. Gorman, specialists at The Center; and to Calvin J. Cotrell, Center project leader for the research project concerned with the core curriculum concept. Appreciation is also expressed to other members of The Center staff and the participants who gave enthusiastically of their time and energy to make this seminar a successful endeavor.

Robert E. Taylor
Director
The Center for Vocational
and Technical Education

Introduction

With the increasing number of departments of vocational and technical education emerging as administrative units in colleges of education, a need now exists to draw together these departments or divisions into efficient and effective organizational structures. It is hoped these new structures will reflect the strong features of past organizational procedures as well as responding to the demands of future educational programs.

In recognition of the concerns of many vocational educators in relation to a movement toward comprehensive vocational-technical administrative units, The Center organized this year's seminar around the premise that those in administrative roles and those with teacher education responsibilities could benefit from a series of papers and discussions related to the core-based vocational-technical curriculum.

To set the stage for this exchange the keynote speaker, James McComas delivered a challenging address, "Expanding Horizons Curriculum for Vocational Education -- An Organizational Plan for the 70's." McComas' speech thus established the groundwork for the presentations of findings of The Center's research project, concerned with the pedagogical aspects of teaching, sought to identify the tasks required of teachers in each vocational service. Three hundred and ninety performance elements relating to the duties and functions of vocational teachers were identified and analyzed in the study. These papers included in the proceedings summarize the work of Dr. Cotrell and associates.

A series of small group discussions and a panel reaction followed the presentations of Cotrell and associates. The reactors, all vocational educators in administrative capacities, gave their views on the research and its ramification. Six discussion groups were then formed to further cull meaning and allow for participant reactions to the research.

The following day a presentation by Duane L. Blake on "The Objectives of the Core Curricula -- Operational Vistas" became the basis for a reaction panel and symposium of five vocational education administrators. The symposium was followed by several small groups discussing and reacting to the views of the previous speakers. The afternoon sessions saw five vocational teacher educators present their views on, "Teaching Strategies for Core Teacher Education Courses." This symposium was then followed by small group work sessions.

The final day of the seminar sought to tie together the seminar program. After observing, talking, and working for two and one-half days, three members of the seminar staff discussed what they felt would be, "The Impact of the Core Teacher Education Curricula as Seen by the: Researcher, Department Chairman, and Teacher Educator." These presentations were followed by a "Conference in Review," given by the keynote speaker whose task was to evaluate the seminar as it progressed through the week. In the concluding meeting a panel of five conference participants were asked to evaluate the seminar from their point of view.

The following collection of scholarly papers, reactions and evaluations of the seminar are given to the reader with the hope they will contribute to a more effective and efficient program development in vocational and technical education.

Edward T. Ferguson, Jr.
Conference Co-chairman

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Foundation Papers Of The Seminar

EXPANDING HORIZONS CURRICULUM FOR VOCATIONAL EDUCATION--AN ORGANIZATIONAL PLAN FOR THE "70'S"

*JAMES D. McCOMAS**

> No more intolerable condition can be imposed upon a human being than to render him useless. Yet one of the most devastating conditions of modern man, uselessness, is the overwhelming plight of the disadvantaged.[1]

This plight of the disadvantaged presented by Smith in *Teachers for the Real World* should be of serious concern to all educators, especially vocational educators. However, those youth and adults who are now caught up in a feeling of hopelessness are but part of many groups of a total population to be served by vocational education curricula and programs. The disparity of needs is as wide as there are classifications, groups and categories, both in and out of school. Visualize the range demonstrated by the mentally retarded, the functionally illiterate, low achievers, physically handicapped, the able but non-college bound, rural and urban poor, and those whose races happen to be in the minority. There are other classifications and subgroupings which could be used to demonstrate the comprehensive nature and scope of curricula which vocational education must provide. To add to the level of frustration, local populations may represent many of these typologies but in such sparse numbers that traditional concepts and programs must be discarded.

The identification of population groups, their characteristics, their occupational goals and needs are merely early steps in curriculum planning and development. We still must identify the potential level of attainment for the various groups, and the implications for their entry into an occupation and possible career ladders or patterns. Occupational aspirations of individuals within the various groups may be unrealistic, either from a lack of motivation which would reflect low levels of aspiration, or,

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*Dr. McComas is Dean, College of Education, University of Tennessee, Knoxville, Tennessee.

[1]B. Othaniel Smith, *Teachers for the Real World* (Washington, D.C.: American Association of Colleges for Teacher Education, 1969), p. 1.

on the other hand, too high because individuals' potentials do not seem to coincide with aspirations. Part of the problem may reside with existing curricula in vocational education which in some instances may be inadequate or inappropriate. Only until we have reached the point where the major elements of a total program in vocational education are available for a variety of groups of students can we make fair judgments as to disparities between individual potential and career goals.

The sixties have been characterized by a growing technology which contributed to occupational obsolescence and changed the face of the world of work by not only scrapping many jobs, but by the creation of many new ones. Technology, too, has helped to change values previously associated with the "hard work ethic" where "brawnpower" has been replaced by brainpower, horsepower, and solid state electronic gear. Thus, we have found manipulative skills which are continuous and replicative and do not require independent and variable judgments have easily been programmed for performance by computers and other mechanical hardware. One merely needs to witness the work of the computer in the operation of highly precisioned lathe work for an example.

Specialization characterizes both our schools and society. Liberal arts colleges which for so many years stressed the need for a general and liberal education now see many of their disciplines highly vocational in their orientation in that the chemistry department is frequently concerned with the preparation of chemists; the department of history is often quite concerned about the preparation of historians and so forth. Many of the arts and sciences have succumbed to a vocationalism of their own or, if you please, we have seen the professionalization of the arts and sciences. This is the very thing 10 to 15 years ago that these same disciplines were critical of vocational education for its "narrowness of scope."

While many benefits have resulted from educational specialization, it does make curriculum planning and development increasingly complex. Those planning vocational education curricula must have an extensive knowledge of the total program of vocational education, and those who have the problem of articulating vocational education into a total curriculum to secure symbiotic values have an even greater task.

State directors of vocational education (and perhaps even college deans) in their zeal to push for more rapid articulation of all services at the university level may contribute to some serious side effects. Especially could this be true, if their end goal would be to abolish specializations.

There must always be a knowledge base. Therefore, while it may not remain in its present form of organization, there will be

a continued need for specialization and some type of vocational services. An articulation of programs does not necessarily mean the end of identifiable specialties. For this reason, I would argue against any strategies for curriculum planning and development which failed to recognize the need for specialization at the undergraduate level and some degree at the master's level.

TRENDS IN STRUCTURE AND PROGRAMS

In its early development vocational education was characterized and exploited for its unique functions. Its "separateness" was encouraged and enhanced by categorical funding and by efforts to protect vocational educators from nonvocational tasks. School administrators in some cases found that there was more of a preoccupation with state standards (often obtaining the status of mosaical law) and which may have focused more upon "thou shalt not" than a concern for occupational competence developed by the program's graduates.

A. Search for Identity. Vocational-technical education has not by any means been a failure but it has demonstrated weaknesses from time to time. There have been times when some within vocational education have fallen trap to placing a higher value in seeking academic respectability than in providing occupational competence. In addition, there may have been a few instances where the primary concern was to maintain vocational service integrity or identity rather than on cooperative planning and teaching to meet a range in occupational choices (especially for limited numbers of students which characterize the smaller school).

Could it be possible too that state and federal legislation and educational planners have ignored that perhaps there are more rural than urban poor? It is a matter of record that many universities have prepared their student teachers in vocational education and other fields in schools that are neither small, rural, isolated and poor; nor have many of these experiences been in poor urban areas represented by the inner city.

B. The Missing Element in Curriculum Planning and Development. Vocational education, historically, has been a missing element in strategies for total curriculum planning and development. (Please note that I did not state that vocational education was missing from the total curriculum.) A major reason for this missing element has been the influence of those in positions of professional leadership who have enjoyed state and national status. These teachers, writers, and researchers of curriculum planning and development frequently have taken the following positions regarding vocational education:

> . . . (a) ignore it entirely and focus only on general education requirements; (b) recognize it as being present

but only to be tolerated because it cannot be summarily dismissed; and (c) present it as a facet of total curriculum without supporting or rejecting it.

Griswold is cited by Taba as stating:

> A rejection of technical subjects and of vocational education of any sort as a narrowing influence is the logical consequence of this viewpoint. That type of "education" is considered to be not education, but training. It is uncalled for encroachment on the essential task of liberal education.

While Taba did not attempt such an argument against vocational education, she does present a view of general education and infers that vocational education is not an integral part of her theory of curriculum planning and development. A contrasting point of view is presented by Saylor and Alexander who have presented a rather unbiased description of typical curricula for vocational education. However, it may be concluded that they do not support or reject vocational education in planning the total curriculum as is illustrated in the following statement:

> . . . it should be understood that we are not here considering the justification for or the place of vocational education in the program of common schooling of children and youth, but only the validity of the curriculum organization itself.

A review of other current writings by most national leaders in curriculum planning and development would reveal points of view on a continuum somewhere between or in agreement with the sources cited.[2]

C. A Favorable Climate. The climate is now most favorable for incorporating vocational education into total curriculum planning and development. I find that lay people, legislatures, and people from the disciplines are all much more supportive of vocational education and its programs. A disenchantment for higher education because of campus unrest; growing concern about the unemployment rate; the obsolescence created by technology;

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[2]J. D. McComas, "Vocational Education--A Missing Element in Curriculum Development," *Agricultural Education Magazine* (December, 1967), pp. 134-135.

the plight of the underprivileged in the inner city and rural poor are just a few of the factors which have caused a greater focus upon and support for vocational education.

D. The Door is Ajar. While most state universities have not adopted open-door admissions policies for their students, the door is at least partially ajar for minority groups and at the insistence by some of those who in the past have demonstrated the greatest bias against vocational and technical education programs at the university level. Thus, our "campus cousins" find it more difficult to maintain logical consistency when they are tempted to criticize vocational students and programs. These factors, plus the concomitant respectability accrued by the availability of funds for research, training, and development for vocational and technical education may not have, in the minds of some, put it in the "educational country club" but these factors have erased most all doubts about its parentage and respectability!

E. Emerging Patterns. It was disappointing in the early sixties to see vocational services attempt to secure additional funding by criticizing each other, rather than building their individual cases on needs and contributions which they could promise by higher levels of funding. I am sure that we are pleased that the profession seems to have matured since that time.

There is considerable evidence which indicates that the vocational services are working and planning together both within state departments and at universities. Many state departments have attempted to fuse the vocational services for planning, developing, implementing, and evaluating total programs in vocational education. Surface changes in organizational structure at the state department level are probably greater than those in vocational education at the university level. However, it is no secret that in any major reorganization there is often much more resulting concern and time consumed in justifying the change and in responding to the structural change than in focusing upon the real issues of program change and development.

Universities too provide poor models for demonstrating change. At some institutions it is extremely difficult to secure approval for new programs or even new courses. The titles of some courses at universities are very poor indicators of course content, and "special problems and seminars in vocational education" have covered a broad range of sins and course offerings!

In many instances, large departments representing individual vocational service areas have developed and maintained their own doctoral programs. Partly, the maintenance of these programs has been at the expense of their students who "with advisement" have elected practically all of their major course work within the department.

Unfortunately, this single vertical extension of courses and experiences does not mesh with the real world in which the new graduate will find himself. If he or she seeks employment at the university level within the next 10 years he or she can expect to be a professor of vocational or occupational education which will be characterized by fused programs at the master's and doctoral levels and with some fusion at the undergraduate level. If, on the other hand, the new graduate wishes to enter supervision or administration within a state department, public school junior college or area school, the ability to give direction to a total program already is very apparent. To knowingly perpetuate programs which limit the graduate's professional choices and career mobility borders upon intellectual dishonesty.

The history and development of vocational education at various universities have posed and continue to pose problems. (Especially is this true where vocational programs and departments are to be found within three or four colleges on the same university campus.) The duplication of courses and overlap in programs in vocational education is the rule more often than the exception. Some attempts for cooperation are apparent but much more must be accomplished.

The following are some of the arrangements which may be found at the university level:

1. Separate bachelor's, master's, and doctoral programs for each vocational service with very little mix in students or faculty. Too, in some cases, one state university will have some vocational programs with others at one or more remaining universities.

2. Separate departmental programs in vocational education, but where students are encouraged to select courses in various vocational service areas. Articulation is almost impossible to achieve in this arrangement and a major concern is usually that of maintaining vocational service integrity or separateness.

3. Separate departmental programs, but a few courses and seminars which are team or cooperatively taught.

4. A unified program in occupational education which attempts to prepare the graduate to give direction to a total program of vocational education or to cooperatively contribute to an integral part of that program.

We have learned very quickly that a single unit for all vocational service areas does not in itself assure a unified and articulated undergraduate or graduate program. However, I am convinced that a single unit does provide the most hope for initiating the needed changes in both undergraduate and graduate

programs. There are many arrangements which one could have within such a single unit which would continue to recognize the individual specializations and meet larger goals as well. However, the director, head, chairman, coordinator, or whatever title the administrator of the unit has, must have both financial and program leadership and authority vested with him or her. I am not optimistic about other arrangements which do not provide specifically for these two conditions. I have less hope for arrangements where the specialties retain departmental or pseudo-departmental status. I feel these must be secondary to the total unit. More is needed than coordination. Further, it is my bias that this unit should be under the supervision and administration of the college of education for a variety of reasons which include this college's responsibility for providing for the professional education of teachers. It is the only college on the university campus which has this as its primary purpose. I am pragmatic enough to know that what I have proposed may not be possible at this time on many campuses. However, there are compromises which could be made to provide total programs in occupational education.

EXPANDING HORIZONS CURRICULUM FOR VOCATIONAL EDUCATION

Many labels have been applied to recent attempts to provide a total program for vocational or occupational education. One could choose from a number of available labels: core, unified, fused, and interdisciplinary. Perhaps the greatest misuse has been made of the latter label where the various vocational services have been equated as representing unique disciplines.

From the available curriculum labels, I have elected the expanding horizons concept for vocational education for two primary reasons. Perhaps before giving these reasons it would be well to tell you that Paul Hanna is given credit for developing the basic plan for this organizational and conceptual plan for the expanding horizons curriculum in elementary education. The elementary student starts his early schooling with a study of those things and people around him (including social and environmental relationships) with which he is most familiar. As his study progresses, he moves from his small local environment (of home, neighborhood, school, and community) to expanded study of state, region, and the world.

I like the idea of the expanding horizons curriculum applied to vocational education for it represents both a concept and a philosophy which should characterize our efforts in planning and developing curricula for vocational education in the seventies. I like the application of the concept for it could allow a focus on the student's initial choice or interests in a single or few occupations and could expand to permit a number of students with

both common and unique interests to expand their horizons through the availability of a program if not a total one, at least one with elements far beyond those represented by a single vocational service.

I am partial to the philosophy which could be associated with such a curriculum which would permit and encourage upward mobility within an occupation or family of occupations; and would concomitantly provide an expanded number of choices for exploration, experience and training in a variety of occupations. Fostering such a philosophy would provide new opportunities for students enrolled in public school programs and would mandate that the vocational undergraduate and graduate student at the university level would be prepared in a program whose horizons expanded to include more than a single vocational service area and showed the dependent relationships within occupational education and between the latter and a total program of education.

ELEMENTS OF AN EXPANDING HORIZONS CURRICULUM

A few elements of such a curriculum for vocational education at the public school level would include:

1. Commonalities or principles which may relate to occupational skills for a variety of occupations expanded beyond single vocational service areas.

2. The application of knowledge and skills gained from subject matter in general education courses.

3. Opportunities and qualifications in various occupations.

4. An understanding of self and others performing in various occupational roles.

5. Planned and supervised experiences in an occupation or occupations.

A few of the elements of an expanded horizons curriculum for vocational and technical education might include:

A. Some possible emphases in vocational education:

   1. History and development of vocational education including the impact and implication of various legislation.

   2. Philosophy of vocational and technical education.

   3. Elements of a total program in vocational and technical education and their relationships to each other

(nature and scope of programs represented by the various vocational service areas and units).

4. Curriculum planning and development for a total program in vocational education.

5. Evaluation of programs in vocational education.

6. Research in vocational education.

7. Internship in vocational education.

B. Some possible emphases in other areas of teacher education:

1. Vocational development theory.

2. Principles of curriculum planning and development.

3. Selected courses in media.

4. Selected courses focusing upon disadvantaged students.

5. Selected courses in administration and supervision.

6. Selected courses in research and statistics.

C. Some other possible areas of study:

1. Selected courses in sociology.

2. Selected courses in psychology.

3. Selected courses in economics and political science.

These have been presented, not for the purpose of suggesting them as model courses, but to show the planning and articulation of a curriculum which has expanding horizons.

THE USE OF SPECIALISTS

Much discussion has taken place recently as to how vocational education should engage and incorporate those dimensions from the disciplines which would allow "expanded horizons." Some major alternatives might be:

1. Employ such specialists as sociologists, economists, political scientists, etc. either within the college or even the department on a full- or part-time basis.

2. Cooperatively develop special courses with the various departments either for your students or for your students and others within the college of education.

3. Secure an educator with an area of interest and experience in these areas and help him to grow in a new role.

There are advantages and disadvantages attached to the various options. The personnel who are already on hand in the various areas and their past relationships are factors to be recognized. Some institutions have been successful with the options stated here or adaptations of them. However, I would commend for your reading an article by Norman L. Friedman who speaks to some of the points raised here. I commend the entire article for your reading.

I want to select only the following citation from Friedman's article:

> But what most took me out of a professional school of education, in the final analysis, was the introspective decision that, for the long run, my substantive and topical sociological interests were too general, broad and changing to be satisfied in that context. I came to believe that the sociologist who chooses a professional school as his academic home should be prepared and feel some obligation and dedication to focus all his sociological energies on that one professional/institutional sector, be it education, medicine, law, social work or whatever. This I was not personally inclined to do on a long-term basis, so I eventually changed to a position in general sociology.[3]

STATE DEPARTMENT-UNIVERSITY ROLES MUST BE COMPLEMENTARY

If we are to support a philosophy that every student should have opportunities for expanded horizons, then there must be close cooperation between state departments and universities. If each is primarily interested in exercising its own prerogatives and control and is suspicious of the other's motives then we can predict less than the best opportunities for good programs to emerge.

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[3]Norman L. Friedman, "Reflections of a Sociologist in a School of Education," *Educational Sociologist*, I (Spring, 1970), No. 3.

Even where relationships between these two agencies are cordial (and in most cases they are) much more joint planning, consultation and evaluation must be realized. A national conference which focused upon models for cooperative planning and program development for state departments and universities would be a valuable contribution.

For some, a conference of this nature would be threatening and increase insecurity, but I believe that mature professionals in state departments and universities would welcome such an opportunity to explore and perhaps propose strategies or models.

OLD WINE IN NEW BOTTLES?

Assuming that state departments continue to reorganize with a focus on a total program of vocational education and that universities develop vocational curricula with expanding horizons, a major consideration remains. How does a state department or a university move from a position of "separateness" in vocational education to a unified approach? The agreement upon philosophy and organizational formats which nurture a unified approach are essential and early considerations, but these alone are not sufficient.

When industry turns out a new or greatly modified product, changes frequently are made in the assembly line, equipment, and often new personnel are secured. However, as most of us in positions of educational leadership know, we are expected to make changes largely with existing staff, and by using the same assembly line and equipment with very little, if any, extra funds to turn out a new and different "product." Imagine the frustration of a supervisor of one of the service areas with 20 years of experience in that service who is abrubtly "knighted" as director of program planning--or program evaluation. Similar examples could be taken from the university level. Existing staff in emerging positions may find it difficult to be accepted by their colleagues in other vocational services. The illustrations and examples he or she uses in communicating program concepts and principles may reflect that his or her experience and knowledge have excluded services other than his or her own.

Those of us at the university level who have had the experience of searching for a departmental chairman for a unified department of occupational education know how difficult it is to identify persons who have the comprehensive knowledge required to meet emerging needs in this field. Few universities have graduated these kinds of personnel. The few that are to be found are more the product of their own desire to expand their own horizons. Must we then find ourselves pouring "old wine into new bottles?" I would suggest that this does not necessarily have to be the case.

This dimension could and perhaps should be a future conference topic for exploration of the duration and magnitude of the present one. Time available now will not allow the topic the consideration it deserves. However, I would like to make the following observations:

1. Faculty and state department staff can, will, and do change. If educational leaders cannot accept this assumption, then they have condemned their own ability to lead. I have seen senior faculty and senior state-staff members change when it has become apparent to them that change is both desirable and necessary.

2. Colleges and public schools have (in the main) demonstrated that they can make changes with existing personnel as witnessed by the adoption of modern math and other educational innovations.

3. It might be possible to gain a comprehensive overview and understanding of a total program overtime in roles which are emerging. However, the profession cannot afford such a luxury of time required, and this process of experience overtime does not insure the role incumbent that he or she will get the diversity of experiences needed for such a role.

4. Workshops and in-service education efforts for these new roles should include both state-staff and teacher educators and would likely speed up understanding, acceptance, and adoption of a unified approach. Further, exchanges of staff members for a quarter or semester between universities and state departments could be helpful.

5. Intensive summer institutes for faculty and state-staff development which would also include inputs from business and industry should receive state and federal funding. Teacher educators and state-staff might be more effective in the long run if they planned to close their offices for a six-week period in the summer to gain additional experience and expertise needed to give direction to a total program of vocational education. Such efforts could and should be followed by two or three other periods during the year.

Finally, I believe we have in this country, indeed in this conference, professionals in vocational education who have the capability of shaping the future of vocational education so it will continue to serve as an increasingly important part of a total program of education. If we are to accomplish that end, we must be more venturesome than we have in the past. At times,

we must be willing to abandon safe and comfortable programs which serve only a few and be willing to try those that present greater risks but promise greater opportunities for those our programs should serve. We must be more willing to assume leadership responsibilities rather than finding ourselves being pushed in directions which we know we should go but fail to do so because of vested interests. It is late, much must be done. LET'S DO IT!

The following series of papers relating to The Center's research project "Model Curricula for Vocational and Technical Teacher Education" have been edited for these proceedings. The original presentations given at the seminar were made in conjunction with a visual presentation using three overhead projectors concurrently. Although the following papers have been edited, they are in basic content comparable to those presented at the seminar. The several handouts accompanying the presentations are not included in the proceeding, but will be available in the final report of the research on the Model Curricula.

DEVELOPMENTAL HIGHLIGHTS AND PROCEDURES

*CALVIN J. COTRELL**

For the past several years there has been pressure for curriculum change in teacher education. An increasing number of departments of vocational and technical teacher education are evolving as administrative units in colleges of education across the nation. In many cases, these departments are the result of merging various individual service areas of vocational and technical education. The pressure for this change comes from a variety of economic, sociological, psychological, and pedagogical sources. Shortages of adequately prepared teacher education personnel, demands for more qualified vocational and technical teachers (including conventional as well as new and emerging types), lack of in-service education programs for teachers and other leadership personnel, and overlap in offerings from one vocational service to another within an institution are representative of some of the concerns and problems which have led to the need for developing and defending core and specialized curricula for vocational and technical teacher education.

It has become increasingly difficult to maintain separate departments with each vocational service providing a total professional teacher education program. It seems at times that the greatest concern has been to keep vocational teacher education, regardless of the service area, from being swallowed by other interests. It is past time for vocational teacher educators to get their proper and just domain organized and defended. We are in many cases behind the times in offering relevant teacher education curricula. I am speaking of the need for more courses which are based on the present day activities and needs of teachers. Teacher educators must somehow determine the needs of vocational and technical teachers and show substantial evidence to support professional education curricula, otherwise, these vocational and technical courses shall be lost to liberal arts and general teacher education requirements in baccalaureate and other curricula.

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If teacher educators are to groom teachers and leadership personnel, there is no question that they must make a concerted effort to provide formalized degree programs to serve all of vocational and technical education. No doubt it will be many years before we have an adequate supply of personnel from these sources and no longer have need for emergency preservice workshops.

These needs and concerns just cited have led to the research and development efforts at The Center in the project, "Model Curricula for Vocational and Technical Teacher Education," which was designed to develop, implement and test curricula for the preparation and in-service education of all types of vocational and technical teachers. In this project, the pedagogical aspects of teaching were studied to identify the performance requirements of teachers in each of the vocational service areas.

As a result of this project, some guideline materials have been developed which should be helpful to teacher educators and other state leadership personnel in: 1) designing new teacher education curricula, 2) revising existing teacher education curricula, 3) evaluating teaching and teacher education activity, and 4) establishing performance based certification requirements.

It must be pointed out at this time that we are in the designing stage of a curriculum designing, developing and testing venture which will require several years to complete. Incidentally, over 1,000 persons in an equal representation of all vocational services, have contributed substantially to our current effort. The project staff has tried in all procedures and methodology to give the same attention to both common and unique elements. By common elements, I refer to competencies required of teachers in all vocational services. By unique elements, I am referring to competencies important to only one or a few of the vocational services. If we have been guilty of favoring either aspect of this theme, we have tended to favor unique elements in our developmental procedures.

I am sure we all want to know how to provide relevant teacher education courses and we all want to do our best to meet the needs of the teachers we serve. As findings are shared with you, please keep in mind that the work is just beginning. A complete model curriculum has not been developed or tested.

In October 1967, Center personnel began work on Phase I of the project. The first challenge was a career analysis of vocational teaching in the vocational services (agricultural, business and office, distributive, health occupations, home economics, technical, and trade and industrial education). This effort required the designing of an occupational analysis methodology appropriate for identifying professional level, pedagogical performance requirements of teachers. The current project has been

limited to the professional education needs of teachers and we have found this aspect to be sufficiently challenging without getting involved in the technical competency or general education requirements of these teachers.

Introspection and interview techniques of occupational analysis were applied to identify 237 performance requirements or elements. These performance elements were evaluated by a task force of teacher educators, state supervisors and master teachers. The task force represented seven services of vocational and technical education and 19 different states. The importance of each performance element for beginning and experienced secondary and post-secondary teachers was rated for each vocational service. These data were analyzed to determine the common and unique elements. There were very few differences found between the elements important to secondary and post-secondary teachers. Approximately three percent of the elements were found to be unique for experienced teachers in each service. Approximately 14 percent of the elements were found unique for beginning teachers except for distributive education which claimed a higher percentage. Distributive education, incidentally, was the only area claiming cooperative education for the bulk of its programs. After reviewing the results, the task force was called together to explain the ratings. Some of the ratings didn't make sense, therefore, an opportunity was provided to discuss the otherwise unexplainable differences or lack of differences among services. Performance elements rated important to beginning teachers indicated some priorities which would be helpful in the development of emergency workshops for preservice teacher education. The data on experienced teachers tended to be valuable for organizing baccalaureate and master's level curricula in teacher education. Unfortunately, the unique elements tended not to be helpful in projecting needs for specialized courses for each service.

In an effort to verify the 237 elements and discover some new elements, a national critical incident study was conducted in which 700 teachers supplied critical incidents. Approximately 30 new elements were discovered; the importance of 140 others was verified. The evidence acquired in the analysis of the critical incident data tended to give one more tool to use in making decisions on important performance elements to consider in curricular projections.

To better communicate the possible intent of the performance elements, the project staff started developing general objectives. The thought was that this would be a natural and intermediate step from performance element discovery to getting down to the specific objectives of teacher education problems. That is, general objectives would serve as guidelines for the project staff and others who would be concerned with developing, revising or evaluating teacher education curricula. Before the general

objectives were completed the pressure of the national concerns for cooperative educational personnel needs was felt. Thus, an extension of this project was initiated to study the teacher education needs of teacher-coordinators of cooperative secondary school programs.

The emerging off-farm agricultural, distributive, wage earning home economics, office, special needs, and trade and industrial cooperative programs were included in phase 2 of the study. As in phase 1, the pedagogical functions of teacher-coordinators of cooperative programs were identified through interview and introspection career analysis techniques. Three hundred and eighty-five performance elements were identified. The importance of these elements to the success of teacher-coordinators was evaluated by mailing an instrument to a 300 member national advisory committee of outstanding teacher-coordinators (50 for each of six areas) selected at random from nominations by state supervisory personnel. Incidentally, the advisory committee represented 12 states with the greatest experience in the types of cooperative programs represented in the study. Advisory committee recommendations were analyzed to determine the relative importance of each performance element for each vocational service and to all services. A factor analysis was used to help identify clusters of elements. Then, a 10 percent stratified random sample of the advisory committee was called to The Center for a meeting to review the results and help interpret the analyses.

If you have any faith in outstanding teacher-coordinators knowing what pedagogical duties are required of them, you will be interested to learn that there were only minor differences discovered in the performance requirements for the six services or areas. We had to conclude that our study of performance requirements did not support the original theme of common and unique elements. That is, finding elements common to all services and elements unique to each service.

By logical interpretation and comparative analysis, the results of the two phases of this project have been merged and reduced into one set of performance elements. Perhaps in doing this the results have been over simplified but it is hoped that you will appreciate not having to examine several data sources. From the project's investigations to date (through phases 1 and 2), the staff has been forced to conclude the performance requirements for a career-based and relevant teacher education program are (1) the same for secondary and post-secondary teachers of in-school laboratory programs in all services and (2) the same for teacher-coordinators of cooperative programs for all services. However, the requirements for teachers of in-school programs were found to be different from those for teacher-coordinators of cooperative programs. At the present time we have performance

elements of pedagogy for all teachers in core basic and performance requirements for in-school laboratory and cooperative personnel in two options. Please note that we are not saying that the specific objectives or teaching strategies or type of teacher education programs or courses or the time of offering are the same for all services.

The developmental highlights and procedures have been reviewed. Subsequent presentations in this series will familiarize you with a career analysis procedure to identify the performance requirements. Two presentations will be given on core basic and one on core options in revealing these performance requirements. Then, presentations will be given on how the performance elements may be used in developing general objectives and specific objectives suitable for courses to prepare educational personnel in your own institution or state. Finally, a summary for the series, some ideal dimensions for the model, and projected steps and needs will be presented.

CAREER ANALYSIS PROCEDURES

*MARILYN J. MOLNAR**

In this presentation, the performance basis of the staff's effort will be described by reviewing the analysis procedures which led to the development of performance categories, elements and clusters. Communication in the subsequent presentations will be dependent upon understanding the terms and concepts which were used in this vocational and technical teaching career analysis. The three major terms with which you must be familiar are "category," "performance element," and "cluster."

The project staff divided the pedagogical requirements of teachers into 10 functional categories in order to focus efforts on workable sized blocks. The first category is Program Planning, Development and Evaluation. In this category the teacher would help plan, develop and evaluate the vocational program. This category includes such tasks as conducting a vocational survey and working with an advisory committee. The second category is Instruction-Planning. In this category, the teacher's duties revolve around selecting and developing units and lessons of instruction. Also included in this category would be selecting instructional materials.

The third category is Instruction-Execution. This category involves the teacher in the effective use of teaching methods and educational technology. The fourth category is Instruction-Evaluation. Here the teacher would be assessing, reporting and interpreting student progress. The fifth category is Management. In this category the teacher is involved with such tasks as completing reports and managing the laboratory and students.

The sixth category is Guidance. In this category the teacher is involved with the advising and counseling of the students. This is in addition to those specific duties performed by the school's guidance counselor. The seventh category is School-Community Relations. Here the teacher is involved in school and

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community activities which will aid in developing mutual cooperation. The eighth category is Student Vocational Organization. In this category the teacher is involved with organizing and advising the student organization.

The ninth category is Professional Role and Development. In this category the teacher would be involved in all the activities that would aid in his professional development, such as participating in professional organizations and obtaining advance training. The tenth category is Coordination. This category is concerned with the teacher-coordinator's duties in maintaining the cooperative vocational program. Examples of tasks included in this category would be establishing training stations and supervising student-learners.

As a quick review, the 10 categories are:

1. Program Planning, Development and Evaluation
2. Instruction-Planning
3. Instruction-Execution
4. Instruction-Evaluation
5. Management
6. Guidance
7. School-Community Relations
8. Student Vocational Organization
9. Professional Role and Development and
10. Coordination.

After identifying the 10 categories the next step was to identify the performance elements. A performance element is a statement of an observable behavior which describes what a teacher will be doing as he functions in the teacher role. A sample element would be present information with the overhead projector. The performance element may be further defined or clarified by the following specific statements:

1. A performance element consists of teacher behavior which may be divided into steps or sub-concepts which are organizable and teachable.
2. A performance element is an entity in itself (capable of standing alone), but has greater meaning and utility in combination with other elements.

3. A performance element is a statement of teaching behavior recognized and understood by a majority of the members of the teaching profession.

To facilitate the development of performance elements a list of standards was composed by the project staff to be followed in writing the performance elements. The performance element must:

1. Be a clear, concise statement.

2. Contain no abbreviations or ambiguous words. (Words such as "appreciate," "know," and "believe" should be avoided.)

3. Begin with one action verb.

4. Be a simple statement without qualifiers. (Unless the qualifier is essential to the meaning of the statement.)

5. Be capable of being broken down into sub-topics. (An example of this would be as follows: present information with a sound motion picture. Not: focus a projector.)

6. Differentiate teaching behaviors. (An example for this would be as follows: conduct a panel discussion. Not: use group discussion methods.)

7. Contain current teacher education terminology.

8. Be applicable to all vocational service areas. (In other words, include synonyms to make the performance element statement acceptable to more than one service area rather than prepare several similar performance elements which are acceptable only to a single service area.)

After the merging of all the data from Phase I and Phase II of the project, a list of 390 elements was completed. To facilitate communication related performance elements were grouped into clusters under their respective category. The grouping of elements under 50 performance oriented cluster titles resulted from a combination of a factor analysis by computer and logical synthesis by the project staff.

Now to review, it is important to remember that there are 10 categories, 50 clusters, and 390 elements. An example of each of these is as follows:

Category: Instruction-Execution
Cluster: Engage Educational Media and Aids
Element: Present information with overhead projector.

The 50 cluster titles plus samples of performance elements will be given in the next three presentations.

CORE BASIC PERFORMANCE REQUIREMENTS

*CHARLES R. DOTY**

This presentation and the next two will identify all the clusters of performance elements evaluated as being important guidelines to develop the model curricula. The guidelines consist of two parts: 1) those labeled core basic, required for all teachers; and 2) the core options for in-school laboratory teachers and teacher-coordinators of cooperative programs. This presentation and the next will present the performance requirements that should be met by all students--the core basic of the model curricula. Following the core basic presentation, the core options will be presented. The guidelines are for the development of model curricula for teacher education in secondary and post-secondary in-school programs as well as secondary cooperative education programs. The inclusion of these clusters of performance elements for the model curricula is supported by evidence obtained from the statistically tested data with logical interpretation by the project staff.

Four categories of the total of 10 will now be presented. These categories are: 1) Instruction-Planning, 2) Instruction-Execution, 3) Instruction-Evaluation, and 4) Professional Role and Development.

The titles of the clusters of performance elements within each category just mentioned will be presented in the following paragraphs. Please recall that a cluster title represents those performance elements which were combined through a process of factor analysis and logical synthesis.

Within the category, Instruction-Planning are five clusters of performance elements. These clusters are: 1) Structure A Course, 2) Design A Course Unit, 3) Plan A Lesson, 4) Select Instructional Resources, and 5) Develop Instructional Materials.

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The clusters of performance elements in the category Instruction-Execution are: 1) Direct Student Activity, 2) Promote Group Interaction, 3) Apply Basic Instructional Strategies, 4) Employ Teacher Centered Methods of Presentation, and 5) Engage Educational Media and Resources.

The Instruction-Evaluation category has four cluster titles: 1) Evaluate Performance of Students, 2) Develop Tests and Rating Sheets, 3) Administer and Analyze Tests, and 4) Evaluate Quality of Instruction.

The Professional Role and Development category contains the cluster titles: 1) Uphold Philosophy and Goals of the Profession, 2) Contribute Professional Service, 3) Advance One's Professional Competencies, 4) Assist with General School Duties, and 5) Supervise Student Teachers.

Up to this point, I have shown four of the 10 categories and the cluster titles within these categories. The next step is to present the performance elements under a selected cluster title.

The cluster title to be illustrated is "Apply Basic Instructional Strategies" and it is from the category Instruction-Execution. This cluster title contains 10 performance elements describing what a teacher will be doing as he functions in the teacher role.

The performance elements are: 1) introduce a lesson, 2) obtain summary for a lesson, 3) employ oral questioning techniques, 4) acknowledge student verbal and nonverbal cues, 5) enrich instruction to challenge the abilities of the abler student, 6) reinforce learning, 7) provide remedial work for slower students, 8) employ reward techniques, 9) establish frames of reference to enable the student to understand a situation from several points of view, and 10) apply nonverbal techniques such as gestures, facial expressions and silence.

This presentation has outlined the guideline clusters for the categories of instruction and professional role.

CORE BASIC PERFORMANCE REQUIREMENTS

(CONTINUED)

*ROGER J. WILSON**

Four categories considered to be a part of the core basic portion of the guideline were given in the last presentation. To continue--five additional categories are now introduced. These are:

1. Program Planning, Development and Evaluation,
2. Management,
3. Guidance,
4. School-Community Relations, and
5. Student Vocational Organizations.

These categories along with their appropriate clusters and a sample of the elements included in one of the clusters will be presented.

Under the category, Program Planning, Development and Evaluation, two clusters are: 1) Plan a Vocational Program, and 2) Evaluate a Vocational Program.

The elements in this category were identified with recognition of the fact that the teacher may function either as an individual or as a member of a team with other faculty and administrative personnel.

The elements which were found to be common to all vocational education teachers under the category, Management, have been grouped into five clusters:

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1. Project Instructional Resource Needs,

2. Prepare Budgets,

3. Procure Supplies and Facilities,

4. Maintain Records and Filing Systems, and

5. Control Student Behavior.

In some instances the teacher's responsibility is expected to extend beyond his own area of instruction. For example, in the cluster, "Prepare Budgets," the teacher not only prepares a tentative budget for his own area, but coordinates it with those of other teachers in the area or department and then cooperates in presenting it, through proper channels, to the appropriate administrator.

Guidance is an important function of any good education program, particularly in vocational education. The guidance provided by the vocational teacher may range from offering detailed information on occupational opportunities to simply referring the student to a more qualified individual for assistance. The common elements in this category have been grouped into five clusters:

1. Obtain Background Information on Students,

2. Promote Constructive Interrelationships with Students,

3. Counsel Students,

4. Involve Resource Persons and Agencies in Assisting Students, and

5. Assist Students in Planning Post-Graduate Education and Employment.

Today, with all of the emphasis and publicity being directed toward the need for occupational education, the vocational education teacher is being scrutinized from all levels. Therefore, it is important that he establish and maintain good relations within both the community and the school.

The project staff found that vocational teachers have important duties which have been placed in the category, School-Community Relations. Two clusters of elements are included in the core basic guidelines under this category: 1) Maintain Good Community Relations, and 2) Maintain Good Intraschool Relationships.

Many citizenship and leadership development objectives of a vocational education program may be achieved through student

participation in a student vocational organization. With this knowledge the project staff included Student Vocational Organization as one of the 10 categories. Three clusters of elements are included under this category:

1. Establish a Student Vocational Organization,

2. Advise a Student Vocational Organization, and

3. Participate in Activities of the State and National Student Vocational Organization.

The broad categories and their clusters which are considered to be important to the core basic guidelines have been given.

A sample group of elements that form the cluster, "Plan a Vocational Program," from the category, Program Planning, Development and Evaluation, contains the following:

1. Consult the advisory committee in planning an analysis of an occupation,

2. Analyze occupations with assistance of employers and labor representatives,

3. Identify the competencies needed for entry into an occupation,

4. Describe the occupational standards of performance for each task in an occupation,

5. Assist in writing general objectives for courses offered in the vocational education program,

6. Develop vocational courses by clustering and sequencing related tasks, and

7. Identify knowledge and attitudes required for the performance of each occupational task included in a course.

As each element is considered we must visualize the teacher in one of two different roles. In one role he may be functioning as the only teacher in a given program. In this role he may be expected to assume the entire responsibility for planning a vocational program. In the second role he may be functioning with several other vocational education teachers in a given service area. In this role he may function as part of a team which includes the other teachers and possibly a department head.

A total of 36 clusters have been presented which are tentatively considered the core basic portion of the guidelines for

developing model curricula for teacher education. The core basic guidelines consist of those clusters considered common to vocational education teachers preparing to serve in-school laboratory secondary and post-secondary programs, and secondary cooperative education programs.

There are still 14 clusters to be considered. However, these clusters are grouped into core options and they will be the subject for the next presentation.

CORE OPTION PERFORMANCE REQUIREMENTS

*ANNA M. GORMAN**

The two previous presentations have shown the clusters which have been classified under core basic guidelines. My presentation covers core option guidelines. Thus far, two core options have been identified. The first core option contains a category, its clusters, and the performance elements for the in-school laboratory program for secondary and post-secondary levels of instruction. The second core option contains the categories, clusters, and performance elements for secondary-level cooperative education programs such as agricultural off-farm, office occupations, distributive education, wage earning home economics, special needs and trade and industrial education.

For the in-school laboratory core option, two clusters of performance elements came from the Management category. These two clusters are titled: 1) Provide for the Safety of Students in the Laboratory, and 2) Maintain the Laboratory. To help you understand the cluster, Maintain the Laboratory, a few samples of the performance elements or competencies will be given. To "maintain the laboratory," the teacher would have to: 1) maintain an inventory of vocational tools, supplies, and equipment assigned to the laboratory; 2) arrange for the storage and security of supplies and equipment; 3) implement student "check-out" procedures for tools, supplies, and equipment used in the vocational laboratory; 4) schedule laboratory equipment for maximum utilization by the students; and 5) arrange layout of the laboratory to simulate an occupational environment.

The core option for cooperative education is a little more complex because the performance elements which make up this option came from three categories. From the category of Program Planning, Development, and Evaluation, two clusters of performance elements were classified as needed by teachers of cooperative education programs. These clusters are titled: 1) Conduct a Community Vocational Education Survey and 2) Maintain an Advisory Committee. From the School and Community Relations category,

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the three performance clusters selected were: 1) Plan School-Community Relations Activities, 2) Publicize the Vocational Program, and 3) Obtain School-Community Feedback on the Vocational Program. All of the clusters in the Coordination category are included and these seven performance clusters are: 1) Select Student-Learners, 2) Select Training Stations, 3) Develop Training Plan and Agreement, 4) Comply with State and Federal Employment Regulations, 5) Supervise Student-Learner's On-the-Job Experience, 6) Evaluate On-the-Job Performance of Student-Learners, and 7) Improve Related and On-the-Job Instruction. To help you understand the cluster, Select Training Stations, a few illustrations of performance elements will be given. To "select training stations," the cooperative education teacher will: 1) establish criteria for evaluating training station potential of an employer, 2) identify prospective cooperative employers to provide on-the-job training stations, 3) assess the educational adequacy of a prospective training station's facilities and equipment, and 4) assess safety provisions of facilities and equipment of the prospective training stations.

The 10 categories, 50 clusters, and a few sample performance elements have been presented, and you have seen how these have been organized into core basic and core option guidelines to plan model curricula.

PERFORMANCE ORIENTED GENERAL OBJECTIVES

*SHIRLEY A. CHASE**

The clusters for core basic and core options have been described and some sample performance elements have been shown. As the project staff was in the process of identifying the performance elements, it was realized that it would be desirable to have some means of communicating the intent of each element to avoid misinterpretation. The performance oriented general objective was conceived for this purpose. The decision was made to write the objectives on the general guideline level, so they could be used by any vocational teacher educator in developing specific performance objectives to fit the particular situation and purpose. Actually, the performance oriented general objectives are much like behavioral objectives except that they are written on a very general level.

Each performance oriented general objective consists of a statement of the desired activity of the teacher, the general conditions under which the activity will be carried out and suggested general criteria for appraising achievement of the objective by the teacher. Each general objective is based on one performance element which is used as a guide in describing the activity to be performed by the teacher. The conditions given (and/or restrictions and limitations) under which the activity will be carried out must be general in nature in order to be flexible enough to meet the requirements of a variety of teacher education institutions and programs. A set of general conditions has been developed from which the conditions for each general objective may be selected. The general conditions from which selections would be made are:

1. Preservice or in-service programs;

2. Any teacher education institution or program;

3. A methods class, micro-teaching clinic, student teaching, internship or other specific teacher education activity;

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4. Various levels of performance.

The criteria for assessing the performance of the activity are also written on the general level because of the desire to encourage the teacher educator to develop his own specific criteria for evaluation of teacher performance. Each criterion contains an observable and measurable key behavior which is considered necessary for the achievement of the objective by the teacher. It was not the investigators' intention to provide a comprehensive list of general criteria, but only to offer suggestions of what may be used.

The project staff has developed a performance oriented general objective for each of the performance elements. Some are still in the process of being refined before they can be utilized by the faculty of an implementing institution as guidelines for developing the specific performance elements for the particular situation.

The basis for writing the performance oriented general objectives has been reviewed. Now, some examples that have been developed by the project staff will be given. The first sample general objective is taken from the category: Guidance, the cluster: Assist Students in Planning Post-Graduate Education and Employment, and based on performance element #233: The teacher will present information to students on occupational opportunities.

Conditions under which the activity would be performed would consist of a combination selected from the list of general conditions.

The criteria suggested for evaluation of the achievement of the objective are as follows:

1. The duties and tasks required of the occupation were explained.

2. Personnel and skill requirements of the occupation were explained.

3. The working conditions and salary associated with the occupation were described.

4. The opportunities for advancement within the occupation were explained.

5. Information on occupational opportunities was assembled and displayed.

6. Students were furnished with brochures and handouts on occupational opportunities.

The second performance oriented general objective example is taken from the category: Student Vocational Organization, the cluster: Establish a Vocational Organization, and based on performance element #274: The teacher will contact state department personnel regarding the steps to be followed in organizing a student vocational organization.

Conditions would be selected from the same list as indicated previously and the criteria for the assessment of performance would be:

1. Communication was established with the state department personnel responsible for student vocational organizations.

2. Procedures for organizing student vocational organizations were obtained from the state department.

3. All forms and materials necessary for organizing a student vocational organization were obtained from the state department.

The third example of a general objective is taken from the category: Instruction-Execution, the cluster: Engage Educational Media and Resources, and based on performance element #125: The teacher will present information with an overhead projector.

The general conditions would be selected from the same list and the criteria for the assessment of performance would be:

1. Lesson objectives were analyzed to determine the need for using the overhead projector.

2. The manufacturer's guidelines were followed in setting up the projector.

3. Materials selected were on the comprehension level of the students.

4. A variety of projection techniques was used.

5. The overhead projector was used to present information that would aid in the clarification of the lesson.

6. All students were able to see and read the projected materials.

You have been introduced to the performance oriented general objectives which are the intermediate step between the performance elements and the specific performance objectives.

SPECIFIC PERFORMANCE OBJECTIVES

*JAMES G. BENNETT**

The performance oriented general objectives have been presented. These general objectives were developed to serve as guidelines for the writing of specific performance objectives. The project staff has written prototype specific objectives to show how they can be developed from the general objectives. Teacher educators and others may follow this same procedure in developing specific objectives to meet their particular needs.

The specific objectives to be shown have been developed from the general objective--"Present information with an overhead projector."

The structural components of specific performance objectives are: 1) a statement of the desired activity, 2) a statement of the conditions under which the activity is to be carried out, and 3) a statement of the criteria by which the performance of the activity may be evaluated.

One specific performance objective will be presented for each educational domain (psychomotor, cognitive, and affective). In addition, the cognitive example will be altered to show performance for the advanced level and the beginning level.

In each of the following examples the project staff has: 1) stated the desired activity, 2) specified the conditions under which the activity is to be carried out, and 3) stated the evaluative criteria.

The conditions and criteria are not necessarily complete. They could be increased or decreased depending on the intent of the teacher educator or evaluator. This also pertains to the scale. A five point scale has been used in the examples. The scale range could be increased or decreased. The sample specific

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objectives are presented with their conditions, criteria and scale. Let us turn our attention to the specific objectives.

Specific performance objective (psychomotor domain). The example for this domain is--

Given a teaching aids laboratory situation, under the supervision of the A-V technician, the prospective teacher will set up an overhead projector system including a screen following instructions specified in the manufacturer's operation manual. This set-up will be accomplished in accordance with the following criteria:

Scale 0 1 2 3 4 5

1. The manufacturer's recommended sequence for unpacking was followed.

2. The manufacturer's sequence for assembly of the system was followed.

3. The projector was leveled.

4. The screen was aligned.

5. The projector was focused.

6. A sample projection was completed to test the system.

Specific performance objective (affective domain). The example for this domain is--

Given an internship teaching situation with the entire responsibility for the class and lesson, the teacher (intern) will demonstrate a concern for the welfare of his students when presenting a lesson with an overhead projector. He will exhibit the following standards of behavior:

Scale 0 1 2 3 4 5

1. Students were seated to be able to see the screen.

2. Lighting of the room was adjusted for comfort.

3. The quality of the transparencies indicated care in their selection or development.

4. The illustrations were appropriate for inspiring the students.

Scale 0 1 2 3 4 5

5. The illustrations promoted communication as indicated by pertinent questions from the students.

Specific performance objective (cognitive domain) advanced level. An example for this domain is--

Given the (last) week of an off-campus student teaching situation, under the supervision of a cooperating teacher, the student teacher will present a lesson with the aid of an overhead projector and (multiple overlay) transparencies achieving a score of (5) applying the following criteria:

Scale 0 1 2 3 4 5

1. The illustrations held the attention of the students.

2. The timing of the injection of the transparencies was effective in enhancing the presentation.

3. Transparencies were used in an effective sequence.

4. Transparency overlay alignment was accurate.

5. Students were able to see and read the projected materials.

6. A pointer was used to emphasize important parts of the transparency.

7. A pointer light or transparency pointer was used rather than touching the screen with an object that might damage it.

8. The image on the screen was not obscured by the movements of the teacher.

9. The projection lamp was off when transparencies were not being used.

Earlier it was stated that the cognitive domain specific performance objective would be altered to show performance for the advanced level and the beginning level. The advanced level example has been presented. We can tailor the example for the beginning

level teacher by substituting the following key words in the brackets as follows:

Specific performance objective (cognitive domain) beginning level.

> Given the [first] week of an off-campus student teaching situation under the supervision of a cooperating teacher, the student teacher will present a lesson with the aid of an overhead projector and [single] transparencies achieving a [3] level score applying the following criteria:

The evaluative criteria for beginning teachers are similar to the evaluative criteria for advanced level teachers with one exception, criterion number 4--"transparency overlay alignment was accurate"--does not apply to beginning level work. Thus, we eliminate it and we have our evaluative criteria for the beginning level.

You have seen how specific performance objectives may be developed using general performance objectives as guides. Three sample specific performance objectives representing the three domains (psychomotor, cognitive and affective) were presented. The conditions, criteria and evaluative scale used in these examples could be modified as deemed necessary by the evaluator.

THE FUTURE: COOPERATIVE DEVELOPMENT OF MODEL CURRICULA

*CALVIN J. COTRELL**

Procedures which were used in developing the guideline materials for model curricula have been given. You have been familiarized with the career analysis techniques used to identify the performance requirements--categories, performance elements and clusters. These requirements have been presented as a means for projecting core basic and core options in vocational teacher education of personnel for laboratory type programs and for cooperative type programs. A few examples of general objectives have been given. Also, samples of specific performance objectives representing the psychomotor, cognitive and affective domains of educational objectives have been presented. In the future, many more specific performance objectives must be prepared, however, it is believed these can be developed best in a cooperative effort with a teacher education institution. Because conditions and measurement criteria vary so much from institution to institution, it is not practical to write specific performance objectives based on hypothetical settings and then hope that conditions will be correct for an actual teacher education situation. Developing the teaching strategies and the specific performance objectives will require a great deal of effort. To expedite the development of model curricula, some facilitating devices for the generation of specific curricular materials must be prepared. By next September, the project staff will have developed many of these facilitating devices that will assist in selecting teaching strategies and in writing and sequencing specific performance objectives.

Although the performance requirements and guidelines have been presented in terms of core basic and core options, it is not certain that all offerings at the undergraduate or at the graduate level should be core offerings. While the project staff has been trying to get at the truth in looking for the common and unique elements in vocational and technical teacher education, one might say there is no convincing evidence to indicate all these offerings

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must be provided on a core basis. However, there is little evidence to support specialized offerings. The project staff hopes to continue to work toward the initial objective, core courses to meet the needs common to all vocational teachers and specialized offerings to meet the needs unique to each service area. Perhaps these presentations have provoked you to help identify research or ideas that will lead to the ideal balance in these offerings. You should find our career analysis system and guideline materials helpful regardless of your present teacher education program needs. It's up to you to decide whether your curricula will be core or specialized offerings or a balanced combination.

A career oriented, performance-based and relevant teacher education curricular design has been presented. A few more of the ideal dimensions of the model toward which we have been working will now be discussed. One of the project staff's concerns is for making professional education a viable offering. We believe this can be encouraged by starting performanced-based professional education as early as possible in the formalized baccalaureate program. In this situation, we would like to have a cooperative program, that is, a prospective teacher starting off as a technician or para-professional working with a qualified master teacher performing those duties that he is capable of handling without prior training, or tasks he is capable of handling as the result of correlated professional education. This on-the-job training and related instruction would start, hopefully, at the very beginning of the degree program. The objective would be to provide the necessary relevant professional education with these para-professional experiences. The teacher could grow from some very minimum kinds of experience in the freshman or junior year to the full responsibility for teaching with little supervision provided by a master teacher in the senior year or in a subsequent internship. Of course, this carries with it the assumption that the professional experience will progress from the simple to the complex or from little responsibility to great responsibility in teaching, i.e., a planned progressive experience from the para-professional level to the desired level of professional teacher competency. To facilitate that ideal, it seems essential to have flexible offerings in small units which we might call modules of teacher education. These would be available to the prospective teacher on a directed, individualized self-instructional basis. The modules would require the very careful development of materials to facilitate individualized instruction. It would mean quite a different approach than we now have in many teacher education settings. The plan certainly would not eliminate the need for many highly qualified teacher educators who definitely would become instructional facilitators. If instruction were available on this individualized self-instructional basis, the master teacher and the teacher educator could meet the needs of the prospective teacher and provide opportunity to study performance oriented pedagogy that would be essential and relevant to

his job assignment. A prospective teacher would be tested for pedagogical competency and given advanced standing if he had prior training or experience. Instructional modules for his development could then be selected on the basis of his need. Performance-based criteria for graduation and certification would be considered imperative. It may take many years to develop all of the essential materials. We believe that identifying general objectives and then developing specific performance objectives, as has been discussed previously, is a step in the right direction. These guidelines will help us in developing materials such as the individualized, self-instruction modules mentioned. It is hoped that a balanced combination of individualized instruction and group instruction would be provided for the prospective teacher. These dimensions plus many others would contribute to the ideal model curricula for vocational and technical teacher education.

In carrying out such an educational program, the teaching techniques would be demonstrated which were found most desirable and most helpful in local programs. When a person has completed a teacher training program, we want him to go forth and to do his work in the exemplary manner in which he has been prepared, i.e., skilled in the selection and application of a variety of teaching methods and techniques. Too often teachers go out and teach as they have been taught. In the past, too many of our teachers have been teaching by the lecture method only. This may have happened because, in many cases, lecturing is the easiest way to carry out a teacher education responsibility. Then, of course, when our teachers go forth to do good they in turn like to lean on the easy way and the way in which they were taught. But, a respect for individualized self-instruction isn't all we would expect a new teacher to acquire as a result of completing training in the model curricula. Among other instructional improvements, it is believed that results of The Center's 12 studies and others in micro-teaching may be incorporated in the model teacher education curricula.

Now, let's get back to reality and say a few more words about the immediate future. As was indicated previously, the project staff is in the designing phase of a curriculum designing, developing and testing effort which will take several years to complete. One of the next steps is to identify a cooperating higher education institution in which to work with the faculty to develop model curricula around the performance requirements identified and the best known practice and theory for teacher education. The criteria have not been developed to use for selecting the cooperating institution. There are many factors to consider. If we are to have many core courses, creative teacher educators will be required who are committed to making these kinds of courses work. Since many teacher educators now are committed to specialized teacher education, the specialized offerings should not be a great concern. While there will be a need to develop

many facilitating devices and to find ways of improving model curricula, one major concern will be in finding a higher education institution where the teacher education faculty members will be challenged by the "core" concept and will be able to cope with teaching core courses. An institution will have to be located in a state that will certificate teachers prepared in such an experimental program. The institutional requirements in the freshman to junior years would be a very definite factor. If the entire time block is occupied by general education and other requirements, it would be impossible to provide the appropriate professional education experience in the early stages of the program. It would not be possible, then, to follow through with one of the ideals mentioned earlier, i.e., starting professional education on a cooperative program basis during the beginning of the program. There are many other interesting aspects of model curricula developed around the best that we know in practice and theory at this point in time.

We hope to work with a cooperating higher education institution to develop the model curricula on site and to help evaluate the offerings and graduates in a follow-up study. Perhaps, such a demonstration center will help us to develop more evidence to share with you as curricular practices are tested under operating conditions in a model teacher education department. You will have these models to study to determine what is needed or desired for changes in the teacher education curricula for which you are responsible. The project staff knows that the goal of most teacher educators is to provide the most effective and efficient curricula possible. Regardless of your teacher education program structure (whether core or specialized by service area) it is believed that you will find constructive ways to use the guidelines presented.

OBJECTIVES OF THE CORE CURRICULA IN VOCATIONAL TEACHER EDUCATION--OPERATIONAL VISTAS

*DUANE L. BLAKE**

The purpose of this paper is to identify the overall objectives of the core curricula and present a vista that may be helpful in the development of teacher education programs in Vocational Education. The application of these objectives and this vista to education will necessarily be an evolving one in many situations and many modifications and adjustments made before a format emerges that will be in general use. A number of the ideas presented are the personal conception of the writer and should be treated as such.

Vocational teacher education has through the years developed in many directions during its struggle for recognition within the walls of higher education. In too many cases, fragmented programs resulted from the severe curricular reform movements, behavioral psychologies, systems analyses and political conflicts. Now they are being challenged to move out of the status quo to meet the needs of modern vocational education.

The basic principles and foundations of teacher training in vocational and technical education are sound, however, new ways of implementation of these basic principles are now needed to make teacher training for vocational educators more compatible with the needs involved.

The Advisory Council on Vocational Education in its report, *Vocational Education, The Bridge Between Man and His Work*, 1968 related that institutions of higher learning needed to establish high-level programs of teacher education in vocational education. The council indicated a real need for such programs to provide an innovative atmosphere in which teachers and administrators could work. This would provide a professional atmosphere where vocational educators could unite on certain issues, philosophies and programs. The committee also noted that teacher education in vocational education grew in response to occupational categories with added categories as a result of more recent legislation. This has resulted in a multiplication in numbers of separate teacher education programs.

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It follows that substantive content of the various areas of occupational emphasis is different, however, quite a large part of the professional content of vocational teacher education should be very similar in content. As an example when fragmented, teacher education programs in vocational education tend to teach such common elements as philosophy of vocational education as a philosophy of the one particular occupational emphasis. In these cases, the teachers are not totally prepared for employment in the broad field of vocational education.

Likewise, in several cases the teacher education program has become completely separated from the state office responsible for vocational education, further alienating a necessary source of input for meeting teaching preparation needs in the state and region.

Past attempts at teacher education improvement have tended to deal with the fragmented pieces of the total learning environment. Those responsible for implementing changes in our teacher education programs are beginning to recognize that teacher education in vocational education has not kept pace with the need for preparing a new type of vocational teacher and vocational administrator. They further recognize that each of the occupational areas must be viewed as part of a larger or total system. Subsequently, attempts are being made to consolidate fragmented programs into a combined comprehensive interdisciplinary unit of vocational teacher education that can better meet the needs of modern vocational education.

Unless a more holistic approach to change in vocational teacher education is undertaken by professional educators, attempted improvements tend to create ripples which threaten those with vested interests in the more conventional patterns thus generating resistance to the proposed change. A massive approach in the terms of curriculum change and funding of comprehensive vocational teacher education programs offers greater likelihood of needed success to achieve the desired goal.

In 1913-14, a Department of Rural and Industrial Education was formed at Colorado State University. As each new occupational area developed they have been added to the departmental structure. Other services performed in the early stages of the department were education for rural teachers and psychology. Vocational education was separated from education and psychology in 1953 and began functioning as a comprehensive interdisciplinary department of vocational education for the purpose of preparing vocational teachers and vocational administrators. At the present time, the department has a combined total of 900 students preparing to be vocational teachers or administrators at the bachelor's, master's or Ph.D. levels. The department operates under a contract with the State Board for Community Colleges and Occupational Education

and maintains a close relationship with this board for vocational education.

It seems appropriate at this time to consider a set of objectives for the core curriculum.

OBJECTIVES OF THE CORE CURRICULUM

Upon the organization of a comprehensive core curriculum of vocational education the department will be able to:

1. Build a curriculum designed to prepare teachers and administrators of vocational education who have an opportunity to fully understand the entire field of vocational education.

2. Present a unified approach to budget, curriculum and faculty requests.

3. Provide greater flexibility in student program planning and faculty utilization.

4. Build a high quality comprehensive program in the occupational areas and a greater depth of offerings in all areas.

5. Present a more economical unit of greater utility.

6. Relate more clearly with the state board for vocational education.

7. Provide a cross-fertilization of ideas among the faculty.

8. Identify and implement courses common to all occupational areas taught in a vocational education surrounding.

9. Establish better rapport among a larger number of related departments.

10. Build vocational education as a recognized discipline.

11. Design a more comprehensive offering of classes off-campus.

12. Pool faculty efforts in team teaching and funded projects.

With these objectives in mind, based upon an analysis of all needs concerned, curriculum may be designed.

DEPARTMENTAL OBJECTIVES

A comprehensive department of Vocational Education may best meet its purpose by being accountable for the following overall objectives.

The program will:

1. Provide a desirable balance of general, technical and professional education.

2. Provide a desirable balance of core courses in Vocational Education and specialized courses in the area of specialization.

3. Provide flexibility to meet the individual needs and interests of students.

4. Provide a curriculum of courses which are of the greatest value to the students.

5. Provide competencies in the areas of proficiency needed by teachers of vocational education.

6. Provide adequate preparation in the areas of civic, community and family living.

7. Provide the opportunity for development of interest, independent thinking and understanding at appropriate levels of difficulty.

8. Provide a balance between theory and practice.

9. Be interesting and challenging throughout.

10. Provide extra curricular experiences for subsequent professional development.

11. Provide for student input in curriculum development and change.

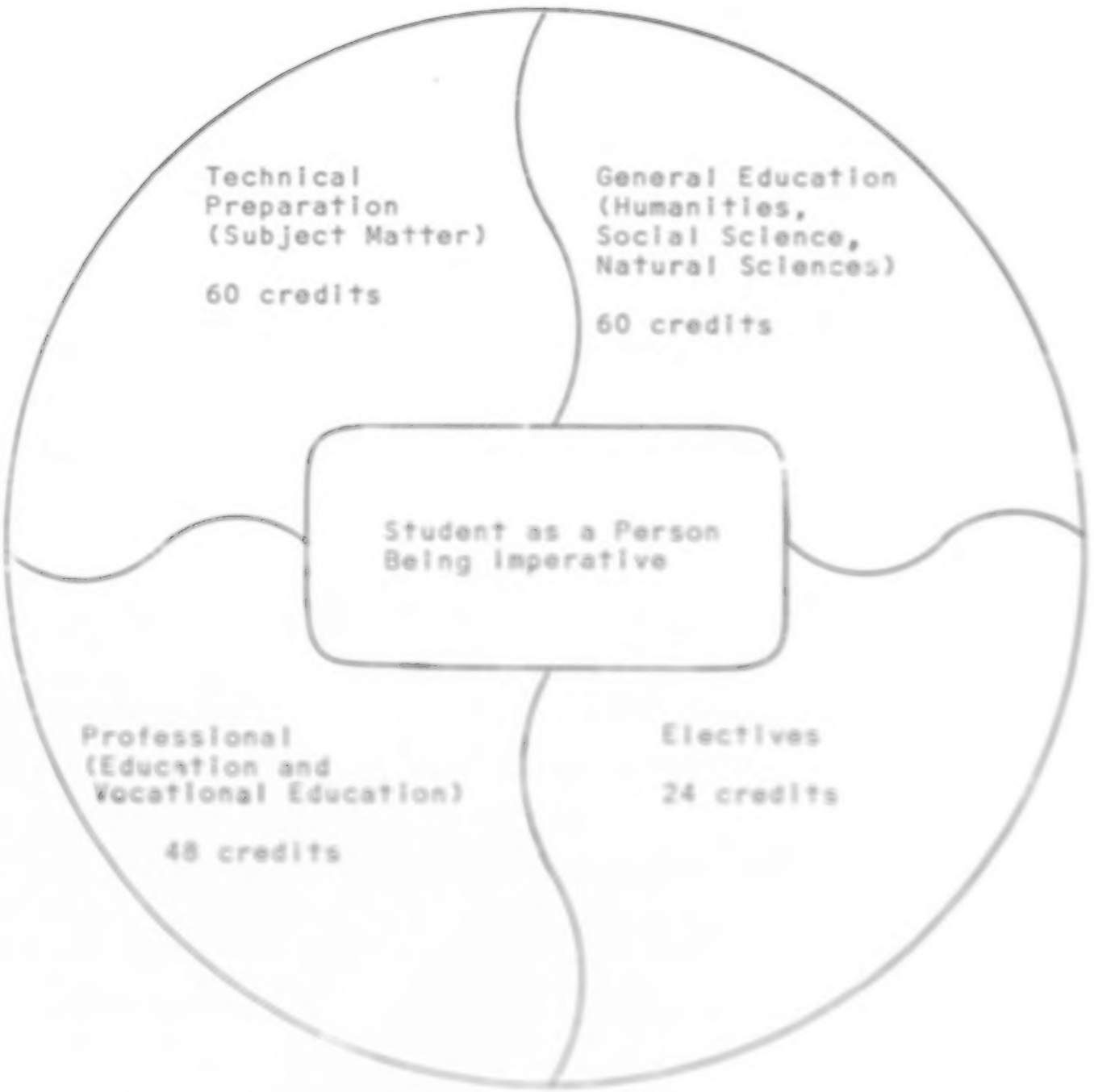
CURRICULUM DESIGN - UNDERGRADUATE

A presentation of a suggested total pattern model for preparing vocational teachers is illustrated in Figure 1.

This model depicts an overall teacher education program which meets recommendations of the National Council for the Accreditation of Teacher Education. These recommendations are "all teacher education should require a pattern of general education in each

FIGURE I

TOTAL PATTERN MODEL FOR PREPARING VOCATIONAL TEACHERS AT THE BACCALAUREATE LEVEL
(EXPRESSED IN QUARTER HOURS OF CREDIT)



amount and of such nature as to assure that all teachers will be broadly educated and cultured persons. The total pattern for each teacher education curriculum should provide general education, subject specialization, and professional education in such amounts as to assure reasonable competence in each area and provide balance in the total program."

GENERAL EDUCATION

The general education section of the model would include the following breakdown:

	Quarter Credits
Communication skills	9
Humanities	8
Social Science	12
Natural Science	12
General Psychology	5
Electives (in above areas)	14
Minimum total	60

TECHNICAL PREPARATION

The technical preparation or subject matter specialty would include a minimum of 60 quarter hours to be obtained in the specific occupational area for which the teacher is preparing. This expertise would be gained by professional courses in the appropriate area or areas and/or be gained by competency examination over nonprofessional work experience. In this model both routes of acquiring the necessary expertise are available depending upon the background of the potential student. In this case the competency examination may result in a maximum of 64 quarter credits fully meeting this requirement for those qualified. The student who attends a two-year post-secondary vocational-technical program may receive a maximum of 96 quarter hours of transfer credit which includes the vocational-technical program, related course work and a trade competency examination if applicable. A minimum of three years of full-time work experience is required to qualify for taking the trade competency examination.

PROFESSIONAL EDUCATION

This section of the model is a major concern in this paper. An illustration of basic requirements of the professional section of the total pattern model is in Figure 2.

Depending upon basic structure within the university, most of the preparation in this area should take place in the comprehensive department of vocational education. Courses in the professional education area are classified into 1) vocational education core and 2) specific occupational area.

The offering of courses classified as to level is illustrated in the following numbering system:

100-299 Courses primarily for freshmen and sophomore students.

300-499 Course primarily for junior and senior students. Acceptable for graduate credit for students holding bachelor's degrees.

500-699 Courses primarily for graduate students.

700-899 Courses for graduate students only. Undergraduate students may not receive credit for courses numbered 700-899.

The required vocational education core courses are designed to meet the overall design of the professional section of the total pattern model as shown in Figure 2.

The basic educational foundations, as taught in a foundations course in the department of education at Colorado State University has been included in VE 200, Principles and Educational Foundations of Vocational Education. VE 200, Principles and Educational Foundations of Vocational Education, or VE 400, Philosophy of Vocational Education, is required of all students. VE 400, Philosophy, has an intentional overlap of 25 percent with VE 200, Principles, by design. Those with past experience as a vocational teacher are pre enrolled in VE 400. Many teachers following the pattern, illustrated in Figure 3, for those with technical preparation may have taught several years prior to beginning a degree program. It has been found that these teachers are better suited to a more advanced course. VE 400 is also required of those pursuing the master's degree and not having the traditional vocational teacher preparation experience. An example is the engineer who has been employed in a post-secondary technical program. VE 400 is also highly used by guidance counselors and school administrators. Both VE 200 and VE 400 are available to those persons exploring vocational teacher education.

FIGURE 2

PROFESSIONAL SECTION OF MODEL

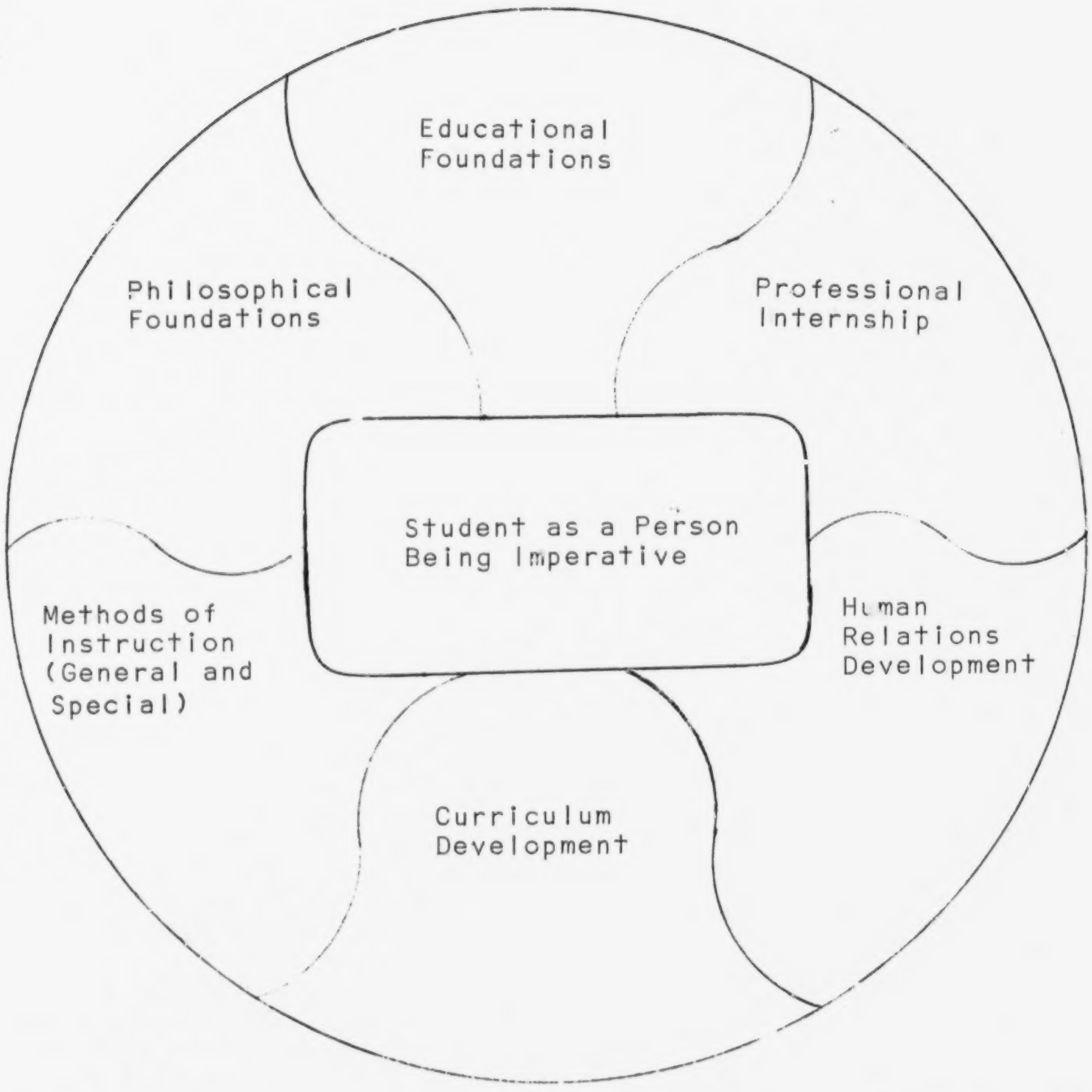


FIGURE 3

PROGRAM PATTERN ALTERNATIVES WITH TECHNICAL PREPARATION PRIOR TO ADMISSION
(48 QUARTER CREDITS PER UNIT)

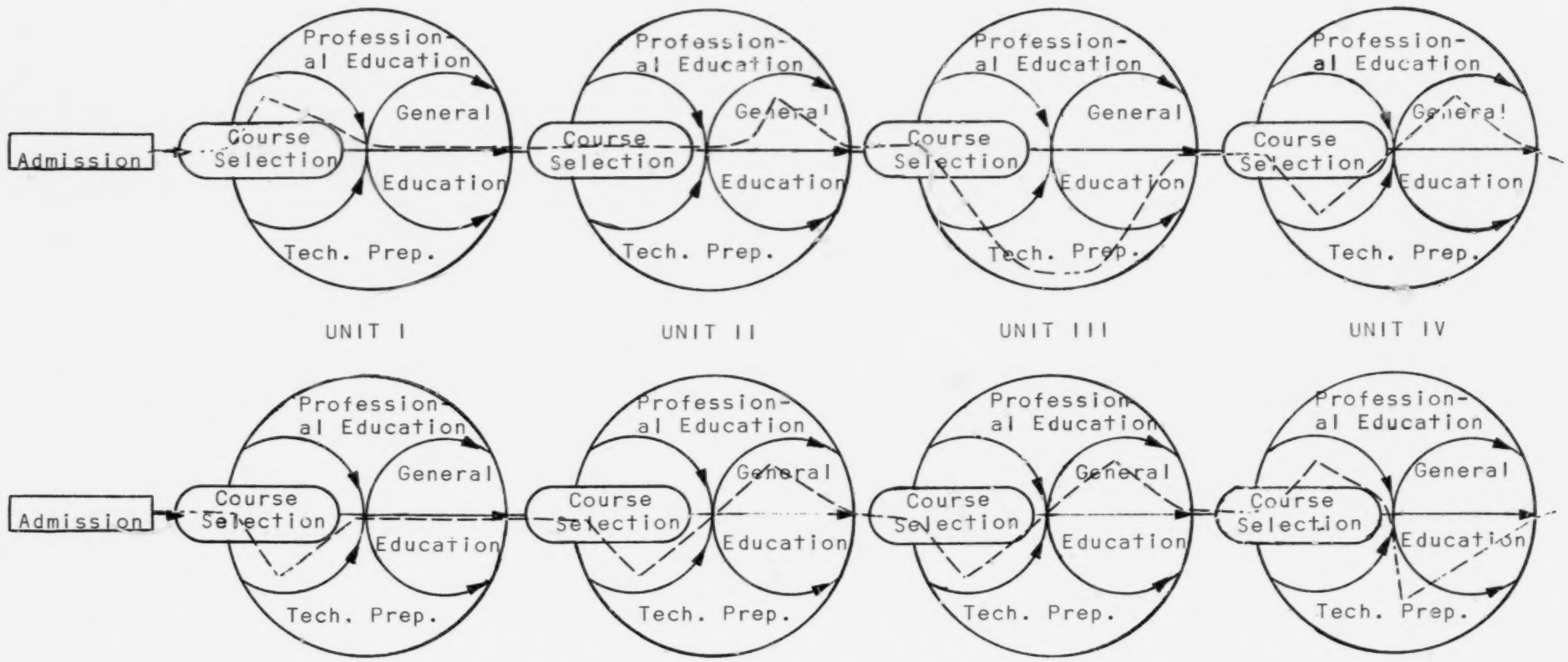


FIGURE 4

PROGRAM PATTERN ALTERNATIVES WITHOUT TECHNICAL PREPARATION PRIOR TO ADMISSION
(48 QUARTER CREDITS PER UNIT)

Courses VE 201, Occupational Analysis, VE 401, Curriculum Development and VE 405, Performance Evaluation, are designed to complement each preceeding course and follow the recommended steps in a new book *Writing Performance Goals - Strategy and Prototypes* by Dr. Harry Huffman, Professor of Vocational Education, Colorado State University. This book is being printed at the present time.

PROGRAM PATTERNS

As illustrated in Figures 3 and 4, various program patterns at the baccalaureate level may be utilized. Two patterns emerge as the most common. These two most common program patterns are 1) that pattern utilized by those with previous technical preparation through work experience and 2) that pattern utilized by those without previous technical preparation. By designating each circle as a unit of 48 quarter credits and equivalent to one academic year of work various patterns can be followed to gain the necessary 192 credits for the bachelor's degree.

For those students with previous technical preparation, the emphasis will be some professional courses to get started with major emphasis on the general education area during the first two units. During the third unit the credit for technical preparation is obtained by examination with the fourth unit being partially obtained by exam and the major credits being obtained in the professional area.

A different approach is usually followed by the student without previous technical preparation. In this case the technical area and general education areas are usually in the forefront with a slight amount of professional education being taken during the first year. This pattern continues during the junior year with the following or senior year emphasizing more professional education.

Both patterns must be open to students preparing to become vocational teachers. In addition, a great amount of flexibility must be allowed when following either of the two main patterns to allow for the great variation of background training and opportunity for completing the program.

STUDENT BACKGROUND

There is more variation of background and positions for which they are being trained among those students in vocational education than the entire teacher education program in general education. The average age is higher, the students' budgets are lower with a high percent of them supporting their own family, and a higher percentage have changed goals from the world of work to

professionalism. Subsequently more of them have a less adequate educational background for academic study. Because of maturity, motivation and experience, a high percent of those preparing to be vocational teachers succeed very well in the new academic surroundings.

A tremendous variation in types of teaching positions and subject matter to be taught exists in vocational education. It is for these reasons that two key words in a successful teacher education program in vocational education are flexibility and altruism. There is no longer room in vocational teacher education for the narrow, self-centered teacher educator who thinks that a narrow rigid pattern of courses will eject teachers for modern vocational education. In fact, we should no longer be preparing teachers of vocational education. How about a model that calls for developing men and women who can teach?

It follows, that in vocational education we have thousands of men and women in business and industry who can become teachers. This avenue of manpower acquisition for teaching in vocational education must be utilized to a much greater extent. Universities and colleges are responsible for recognizing this vast source of manpower in a changing society and develc ing teacher education programs in vocational education that will utilize the varied backgrounds of men and women who already possess approximately one-third of the necessary education to become qualified teachers. Examples of the specific areas in which this expertise can be utilized by conducting occupational exams over work experience are: off-farm agricultural related occupations, business and office, distribution and marketing of goods, health occupations, wage earning positions in the home economics area, and the trades and technical occupations.

OCCUPATIONAL EXPERIENCE

Nonprofessional work experience required prior to awarding the bachelor's degree is an area of real concern to all vocational educators. The variation of requirements for work experience probably is greater among states than any other basic program requirement. The pattern of work experience tends to correlate with the program pattern (Figures 3 and 4) as previously discussed. Those following the most common program pattern illustrated in Figure 3 for the students with technical preparation prior to admission, on the average, tend to require more work experience than those without technical preparation prior to admission. The teacher educators in those areas where students do not possess the technical preparation prior to admission to the bachelor's program have followed the theory that teachers prepared in these areas do not have the greatest of expertise in their occupational area, but do have enough general knowledge

about the subject to be able to find the answers and solve most problems. This is not true of those in the areas having the technical preparation prior to admission. In this case the teachers are expected to be the expert. There are basic reasons for these varied opinions. One main reason is the fact that very few universities are able to finance a program giving the necessary expertise in so many varied trades and technical areas.

Many professional educators would like to see this requirement standardized among various occupational areas. Because of the varied levels of expertise needed and the varied demands for men and women who can teach, it is recognized by this writer that realistically these requirements <u>should</u> vary.

However, this model calls for an idealistic, standardized and practical approach to the nonprofessional work experience requirement. The requirement is a minimum of three years of work experience for <u>all</u> vocational teachers with this experience gained by one or a combination of several routes. The routes for gaining the work experience would be: 1) a minimum of three years of full-time on-the-job work experience, 2) completion of a one or two-year post-secondary vocational program plus one to two years of work experience for a minimum total of three years, 3) university sponsored internship program of 36 months of full-time supervised work experience provided on an alternate basis of six-12 months in school and six-12 months on the job, and 4) a combination of any or all of the above routes.

In addition the model calls for an intensive in-service program for the graduate after being employed to teach in vocational education. Teacher educators are required to follow-up each graduate, within the state, by three, one-day visits during the first year of teaching.

A program for placing teachers back in business and industry periodically must also be coordinated in cooperation with the state office for vocational education. Additional in-service education is required to keep the teachers updated in the professional area.

CREDIT REQUIREMENTS FOR THE UNDERGRADUATE PROGRAMS

The following is a model for an undergraduate course offering in professional vocational education utilizing the core curriculum and areas of specialty. The total quarter credits required in the professional area are 48 with 36 obtained in the core area and 12 in the area of desired specialty.

REQUIRED VOCATIONAL EDUCATION COMMON CORE COURSES
IN THE UNDERGRADUATE PROGRAM

		Quarter Credits
VE 200	Principles and Educational Foundations of Vocational Education (or VE 400)	3
VE 201	Occupational Analysis	3
VE 400	Philosophy of Vocational Education (or VE 200) (3)	
VE 401	Curriculum Development (based upon VE 201)	3
VE 402	Instructional Aids and Materials	3
VE 403	Methods of Teaching Youth and Adults in Vocational Education	3
VE 404	Youth Organizations in Vocational Education	3
VE 405	Performance Evaluation	3
VE 406	Human Relations (Self-image and Awareness)	3
VE 493	Student Teaching	9
VE 497	Seminar in Student Teaching	3
	Total	36

ADDITIONAL UNDERGRADUATE VOCATIONAL EDUCATION COURSES
REQUIRED IN THE SPECIFIC SERVICE AREA

		Quarter Credits
Vocational Agriculture Education		
VE 320	Orientation to Vocational Agriculture	3
VE 420	Methods of Teaching Young and Adult Farmers	3
VE 421	Methods of Teaching Farm Mechanics	3
VE 422	Methods of Supervising Occupational Experience	3
	Total	12

		Quarter Credits
Vocational Business & Office Education		
VE 430	Methods of Teaching Typing and Shorthand	3
VE 431	Methods of Teaching Clerical and Stenographic	3
VE 432	Bookkeeping and Data Processing	3
VE 443	Coordination Techniques of Cooperative Programs	3
	Total	12
Vocational-Distributive Education		
VE 340	Fundamentals of Distributive Education	3
VE 441	Methods of Teaching Advertising Displays and Retail Management	3
VE 442	Methods of Organizing Materials in Marketing and Distribution	3
VE 443	Coordination Techniques of Cooperative Programs	3
	Total	12
Vocational-Health Occupations		
VE 261	Vocational Teaching Concepts	3
VE 350	Orientation to Health Occupations	3
VE 450	Methods of Teaching in Health Occupations	3
VE 451	Methods of Organizing Teaching Materials in Health Occupations	3
	Total	12
Vocational-Home Economics Education		
VE 360	Orientation to Home Economics Education	3
VE 460	Program Planning in Home Economics Education	3
VE 461	Methods in Home Economics Education	3
VE 462	Adult Education in Home Economics Education	3
	Total	12

		Quarter Credits
Vocational-Trade & Industrial Education		
VE 270	Shop Organization and Management	3
VE 271	Vocational Teaching Concepts	3
VE 470	Related Instructional Materials in Trade and Technical Education	3
VE 471	Study of Apprenticeship	3
	Total	12

Vocational-Technical Education		
VE 270	Shop Organization and Management	3
VE 271	Vocational Teaching Concepts	3
VE 470	Related Instructional Materials in Trade and Technical Education	3
VE 480	Teaching Vocational-Technical Education	3
	Total	12

SPECIAL COURSES

VE 295 Related Training in Vocational Education. Offered for attendance at an approved company-operated school. One to four credits, maximum of 12 credits.

VE 407 Methods of Teaching the Disadvantaged. Three credits offered for those students desiring to place added emphasis in this area.

At the undergraduate level two special courses are available for those students desiring and needing preparation in the area of advanced technical skills and/or methods of teaching the disadvantaged.

The course VE 295 has been found to be a very useful and practical way for some vocational teachers to be upgraded in their particular occupational areas.

Vocational teachers too many times are not prepared for teaching the disadvantaged. Considerable research in the methods of teaching the disadvantaged has been done and the subsequent results should be made available to those students who are likely

to be dealing with the problem. Therefore, the course VE 407 has been established on an elective basis.

GENERAL MINIMUM CREDIT REQUIREMENTS FOR THE GRADUATE PROGRAMS

The following is a model for a graduate course offering in vocational education at the master's and doctoral level. This model offers the needed preparation in professional vocational education, flexibility, exchange of ideas among occupational service areas and added preparation in education and cognate areas.

GENERAL MINIMUM REQUIREMENTS FOR THE MASTER'S PROGRAM

		Quarter Credits
Vocational Education		24
Vocational Educ. Core	15	
Area of Specialty	9	
Outside of Department		12
Education, Psychology, Sociology, Economics, Agriculture, Home Economics, Industrial Arts, Business and Others		
Electives		9
Vocational Education, Education and Others		
Total		45

GENERAL MINIMUM REQUIREMENTS FOR THE PH.D. PROGRAM

Professional Education		70
Vocational Educ. Core	28	
Occup. Service Areas (4)	12	
Electives	30	
Cognate		30
Sociology, Psychology, Economics, Political Science and Others		
Doctoral Research		20
Total		120

COMMON VOCATIONAL EDUCATION CORE COURSES
FOR GRADUATE PROGRAMS

For the master's, a minimum of 15 quarter credits of course work selected from the following is required:

		Quarter Credits
VE 600	Local Supervision of Vocational Classes	3
VE 601	Administration and Supervision of Voc. Ed.	3
VE 602	Facilities and Equipment in Vocational Ed.	3
VE 603	Counseling Students for Vocational Education	3
VE 604	Conference Leading	3
*VE 690	Methods of Research in Vocational Education	3
VE 697	A-C Seminar in Research (Maximum nine credits)	3
	(A) Tools (B) Data Gathering Devices (C) Programming	
VE 700	Advanced Philosophy Vocational Education	3
VE 701	Public Relations in Vocational Education	3
VE 702	Vocational Adult Education	3
VE 703	Administration and Supervision of Cooperative Programs	3
VE 704	Supervision of Student Teaching in Voc. Ed.	3
VE 795	A-H Special Studies in Vocational Education	3
	(A) Agriculture (B) Business & Office (C) Distributive (D) Health Occupations (E) Home Economics (F) Trade & Industrial (G) Technical (H) Administration	
*VE 797	Seminar in Vocational Education	3

		Quarter Credits
VE 799	Master's Research in Vocational Education	3
	PRIMARILY FOR PH.D. STUDENTS	
VE 800	State and Federal Administration and Policy in Vocational Education	3
VE 801	Financial Organization and Management of Vocational Programs	3
VE 802	Organization of Occupational Education	3
VE 803	Teacher Education in Vocational Education	3
VE 804	Project Development and Management in Vocational Education	3
VE 899	Doctoral Research in Vocational Education	Varies

*Required on all master's programs.

THE MASTER'S STUDENT MAY PROGRAM THE FOLLOWING
400 LEVEL COURSES FOR CREDIT

		Quarter Credits
VE 400	Philosophy of Vocational Education	3
VE 401	Curriculum Development	3
VE 402	Instructional Aids and Materials	3
VE 403	Methods of Teaching Youth and Adults in Vocational Education	3

*Optional Occupational Area Courses Recommended for Administration and Supervision Majors.

Note: (1) Majors in Administration and Supervision are required to take courses in service areas other than their own.

(2) Courses in School Administration are highly recommended.

		Quarter Credits
VE 404	Youth Organizations in Vocational Education	3
VE 405	Performance Evaluation	3
VE 406	Human Relations (Self-image and Awareness)	3
VE 407	Methods of Teaching the Disadvantaged	3

FOR THE MASTER'S PROGRAM, A MINIMUM OF AN ADDITIONAL NINE QUARTER CREDITS OF VOCATIONAL EDUCATION COURSE WORK IS REQUIRED IN THE SPECIFIC PROGRAM AREA OF SPECIALTY.

Agricultural Education

VE 723	Supervising FFA Activities	3
VE 724	Advanced Methods in Teaching Vocational Agriculture	3
VE 725	Advanced Methods of Teaching Farm Mechanics	3
VE 726	Program Planning in Vocational Agriculture	3
*VE 820	Trends and Issues in Agricultural Education	3

Business and Office Education

VE 630	Program Organization in Business and Office Education	3
VE 730	Administration and Supervision of Office Occupations Programs	3
VE 795b	Special Studies in Business and Office Education	Varies
*VE 830	Current Concepts in Business and Office Education	3

Distributive Education

VE 740	Methods of Marketing for Distributors	3
VE 741	Methods in Small Business Operation	3
VE 742	Developing Programs in Distributive Education	3

		Quarter Credits
*VE 840	Seminar in Distributive Education	3
Health Occupations		
VE 550	Organization and Management of Health Occupations	3
VE 551	Advanced Methods of Teaching Health Occupations	3
VE 750	Curriculum Development in Health Occupations	3
*VE 850	Current Issues in Health Occupations	3
Home Economics Education		
VE 560	Problems in Home Economics Education	3
VE 561	Occupational Curriculum in Home Economics Education	3
VE 760	Curriculum in Home Economics Education	3
VE 761	Evaluation in Home Economics Education	3
VE 762	Survey of Methods of Teaching Home Economics Education	3
*VE 860	Trends and Issues in Home Economics Education	3
Trade and Industrial Education		
VE 670	Employer-Employee Relations	3
*VE 780	Current Issues in Trade & Technical Education	3
VE 795E	Special Study in Trade & Industrial Education	3
*VE 870	A Study of Organized Labor	3
Technical Education		
VE 680	Development of Technical Programs	3
*VE 780	Current Issues in Trade & Technical Education	3
VE 781	Supervision of Technical Programs	3

	Quarter Credits
VE 795F Special Study in Technical Education	3
Administration and Supervision	
VE 600 Local Supervision of Vocational Classes	3
VE 601 Administration and Supervision of Voc. Ed.	3
VE 701 Public Relations in Vocational Education	3
VE 702 Vocational Adult Education	3

Most existing graduate programs concerning vocational education usually prepare for specialties in each of the occupational areas. In some of the areas more recently included in vocational education at the graduate level, anything resembling professional training in vocational education is almost nonexistent. It is imperative with present trends in vocational education that a greater thrust be placed on professional vocational education with subsequent preparation in the specialty and cognate areas in that rank order.

Course offerings need to be rethought. Emphasis should be given to new courses specially designed for the professional vocational education offering.

The need for supplementary course work in other departments is especially strong in the cases of prospective administrators. Course work in the school administration area and guidance and counseling should have a high priority followed closely by sociology and other social sciences.

GENERAL CONCERNS ABOUT TEACHER EDUCATION IN VOCATIONAL EDUCATION

At the university level vocational education has the role of preparing creative leaders and teachers who have the ability to visualize and establish the responsibility of vocational education at the local, state and national level. Universities and state boards for vocational education intending to contribute to the total national effort must provide a source of high level leadership personnel which can be done through a comprehensive department of vocational education in teacher education.

This writer has several concerns about the development of realistic teacher education programs in vocational education. Dr. Robert Price, of Oklahoma State University, touched on one concern

when as a consultant to a recent national institute he stated, "We need release from the sophisticated, asinine idea that all students are alike and that they will therefore respond to stimuli in like manner. There is such a devilish comfort in the thought that, 'Well, I know just how he feels.' How can we expect our tyro teachers to act on the premise of individual differences when we, as teacher educators, put them through the same mold and reward conformity to our own favorite patterns of teaching. No wonder the public has doubts about the efficacy of teacher education."

Likewise, Senator George Brown of Colorado related several written statements made by disadvantaged youth in regard to teachers. Three of them were:

"I'd sure as hell like to see a teacher sitting in the stands with us at a football or basketball game--really enjoying the game, rather than being there as a special patrol or cop to watch us."

"I like school. I like gym, recess, lunch and music sometimes. The rest is boring. I used to like math--but my new teacher just wants us to know how sharp he is. He's real sharp, but he can't teach us because he can't reach us."

"The type of teacher that I like is one that can understand my problems--a teacher who would stop and talk with me in the halls. When I get in trouble, he would help me out. If I went to court, he would be with me, not just wishing I'd get sent away."

It is difficult sometimes to understand youngsters with these thoughts. My concern is--are we going to do anything about it? Have we made change in our teacher education curriculum to give our teachers an opportunity to become aware? Have we done anything to change our own thinking? I doubt it!

At one of our recent institutes one of our white educators was overheard to say, "I sure didn't know we were going to have to listen to a bunch of damn niggers," when they learned that three Ph.D.-level black professional educators were being used as consultants. Ladies and gentlemen, I really doubt if very many of us in this room have made an all-out realistic effort to understand the problem. So, how can we expect to do anything for our future teachers? Don't go on swatting flies with an electric iron. Don't misunderstand me, I still recommend the electric iron for pressing pants. Please don't become defensive. But, we must come closer to the real world. Then do it.

How about teaching our teachers to see the youngsters' world through their eyes, also to develop trust and learn to communicate. The teacher is the message. Are we, as teacher educators, proud to say, yes we admit teachers with a 2.3 to a graduate program and

give them a chance to prove themselves, subsequently improving themselves in the areas of need. Or, are we still busy requiring them to write Dick and Jane stories and working mathematical problems for the graduate record examination on a competitive basis with the researcher in biological science who would more likely fail the first week of teaching in a vocational classroom? In a study of the graduate students who had completed programs in vocational education at Colorado State University, the undergraduate gradepoint average was an indicator of success in the graduate program only 36 percent of the time. We have found that 15 quarter hours taken at the graduate level with a combination of courses taken within and outside of the department, to be a much better indicator of success.

In some cases, we have become too defensive. We can produce vocational educators just as well prepared in our field as students are prepared in any other university program. I'm sorry, but some of the registrars and deans will have to change.

It, therefore, becomes important that the training institution select men and women with the right characteristics, provide a comprehensive training program that teaches them to secure the best possible resources and thus produce a vocational teacher or administrator who is in the best position to cause youth and adults to become vocationally competent.

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Content In The Core Curriculum

WHAT SHOULD BE TAUGHT IN THE CORE OR INTERDISCIPLINARY VOCATIONAL TEACHER EDUCATION CURRICULUM

*HAROLD R. BINKLEY**

What we are doing and the direction we are going in terms of the "core" at the University of Kentucky has been influenced by: 1) Business Education becoming vocational, 2) Distributive Education being added to the department, 3) the addition of an Instructional Materials Laboratory to the department, 4) the addition of State Research Coordinating Unit to the department, and 5) our concern for developing a comprehensive program of teacher education in vocational education at both the undergraduate and graduate level.

Growing out of this last point the department initiated a year-long self-study two years ago. Prior to the self-study all teacher-preparation courses, both undergraduate and graduate, were by service areas--agriculture, home economics, and industrial education and taught by professors of the respective service areas.

UNDERGRADUATE

Growing out of the self-study we now have at the undergraduate level one "core" course titled: Orientation to Vocational Education taught at the sophomore level. In my judgement we need another core course dealing with Principles and Philosophy of Vocational Education. We have developed 13 "core" instructional units which are dealt with in one or more of the undergraduate courses, by each service area. The units of instruction are as follows:

1. Youth Organizations in Vocational Education
2. Cooperative and Work-Study Programs
3. Out-of-school Programs for Adults

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4. Innovative Programs in Vocational Education

5. Programs for Disadvantaged and Handicapped

6. Organizing and Using Units of Instruction

7. Organizational Structure for the Operation of Vocational Service Programs in the State

8. Using Research Findings for Program Development

9. Leadership Role of the Teacher

10. Role of the Teacher in Guidance

11. Local Advisory Committees

12. Evaluation of Teaching-Learning

13. Facilities, Equipment, and Materials

These units of instruction were developed by committees made up of representatives from all service areas and include the following: 1) objectives, 2) content, and 3) references. It is visualized that from three to 10 hours of class instruction will be spent in dealing with each of the various units.

Perhaps, in time, several of the "core" units will be included in the one "core" course: Orientation to Vocational Education. And, other units may be combined into an additional "core" course or two.

An advantage which we must not overlook in having students from all service areas in courses at the undergraduate level is that the students come to know one another quite well and to understand the program of each service area and thus develop a mutual support for all vocational programs, and, in particular, in the schools where they teach.

GRADUATE

At the graduate level we have certain college-wide requirements which may be classified as advantages or as restraints, depending on how you look at them.

We offer master's in the following areas:

- Agricultural Education

- Business Education

- Distributive Education
- Home Economics Education
- Industrial Education
- Vocational Education

We also offer a specialist degree in each of these areas.

For the master's the student must take at least one course in three of the following six broad areas:

1. Research
2. Advanced Study in Human Relations
3. Psychology of Learning
4. Foundations in Education
5. Curriculum Development
6. Seminar in Instruction Devoted to Method in Teaching

Vocational students are required to take only one course from areas 1 through 4 and take the remaining courses in education (Vocational Education) from areas 5 and 6. Usually, most of the courses are taken from area 6. Courses are listed under each of the six areas for the various programs for the master's degree in the final pages of this report.

No specific courses are required of all students securing a master's degree. However, in the departments' new course offerings there are 16 courses and seminars which cut across program service areas, whereas a few years ago there were only five courses which cut across service areas.

During the past two years the following kinds of courses have been offered in which teachers from two or more service areas were enrolled:

- Supervision of Vocational Education
- Administration of Vocational Education
- Selecting Teaching Materials
- Research

- Supervising Teachers in Vocational Education
- Supervised Work Experience in Business and Industry
- Vocational Guidance
- Youth Organizations in Vocational Education
- Adult Education Programs in Vocational Education
- Seminars

How have these courses been staffed--who taught them? We have moved toward what might be called "grid staffing." As an individual staff member develops an expertise, desire, or capability to teach an across-the-board course he has been encouraged to accept such a responsibility and the course has been offered, either during a regular semester or the summer term.

This has proven quite successful--the staff members teaching the courses have been challenged and the teachers have liked it. Up to now eight staff members have taught across-the-board courses, some of them two and three.

Across-the-board courses at the graduate level in which teachers, administrators, and coordinators of vocational education have been enrolled produces extra dividends, which are significant--that of developing understanding of the problems of other service areas and building support for the programs of all service areas.

Grid staffing has built new dimensions of understanding, cooperation, mutual support for all service areas, moral, and comprehensiveness of the teacher education program in vocational education at both the graduate and undergraduate level.

The doctoral program at the University of Kentucky has much flexibility. In most cases candidates take a "core" of three or more courses, nine to 12 hours of research and statistics and the candidate may elect one of four areas for subspecialization--administration and supervision, curriculum, research, or teacher education.

The following is a course listing for the master's degree in vocational education:

MASTER'S DEGREE PROGRAMS IN VOCATIONAL EDUCATION

For a master's degree in Vocational Education (Agricultural Education, Business Education, Distributive Education, Home

Economics Education, Industrial Education, or Vocational Education) a minimum of 12 semester hours of graduate work must be taken in professional education. One course shall be taken from three of six areas--I through VI. This program qualifies the teacher for a Standard Certificate if he has completed a four-year undergraduate curriculum.

ALL PROGRAM SERVICE AREAS

Area II: Research

EDP 522 - Educational Tests and Measurements
EDP 656 - Methodology of Educational Research
EDP 657 - Educational Statistics

Area III: Advanced Study in Human Development

SOC 521 - Industrial Sociology
SOC 542 - Human Relations in Administration
EDP 739 - Survey of Research in Human Development and Education
EDP 755 - Human Development and Behavior
EDP 759 - Identifying and Providing for Individual Student Needs

Area IV: Psychology of Learning

PSY 540 - Industrial Psychology
EDP 548 - Educational Psychology
EDP 658 - Problems in Educational Psychology

Area VI: Foundations in Education

EDF 640 - Philosophy of Education
EDF 645 - Foundations of Education
EDF 651 - History of Education
EDF 655 - Comparative Education
EDF 661 - Educational Sociology (Same as SOC 661)

AGRICULTURAL EDUCATION

Area I: Curriculum Development

EDV 672 - Determining Content in Vocational Agriculture
EDC 732 - Principles of Curriculum Development

Area V: A Seminar in Instruction Devoted to Method in Teaching

EDV 670 - Advanced Method in Teaching Vocational Education

EDV 675 - Modern Problems in Agricultural Education
EDV 677 - Advanced Problems in Agricultural Education
EDV 679 - Adult-Farmer Schools
EDV 680 - Directing Farm Practice
EDV 681 - Teaching Farm Shop
EDV 682 - Young-Farmer School

BUSINESS EDUCATION

Area I: Curriculum Development

EDV 615 - Problems in Business Education
EDV 621 - The Business Curriculum
EDV 626 - Classification and Possible Use of Community Resources in Business Education
EDC 714 - The Secondary School
EDC 732 - Principles of Curriculum Development

Area V: A Seminar in Instruction Devoted to Method of Teaching

EDV 511 - Teaching Secretarial Subjects
EDV 512 - Teaching Bookkeeping and Accounting
EDV 513 - Teaching Office Practice, Clerical Practice, and Office Appliances
EDV 615 - Problems in Business Education
EDV 618 - The Social Business Subjects in High School
EDV 774 - Seminar in Business Education
EDV 779 - Seminar in Vocational Education

DISTRIBUTIVE EDUCATION

Area I: Curriculum Development

EDV 517 - Determining Teaching Content in Distributive Education
EDC 732 - Principles of Curriculum Development

Area V: A Seminar in Instruction Devoted to Method of Teaching

EDV 528 - Techniques in Teaching Distributive Education
EDV 526 - Organization and Operation of Adult Programs in Distributive Education
EDV 610 - Simulated Occupational Experience Programs in Distributive Education
EDV 670 - Teaching Vocational Education
EDV 671 - Youth Organizations in Vocational Education

HOME ECONOMICS EDUCATION

Area I: Curriculum Development

EDV 685 - Home Economics Curriculum Construction
EDC 732 - Principles of Curriculum Construction

Area V: A Seminar in Instruction Devoted to Method of Teaching

EDV 683 - Current Problems in Home Economics Education
EDV 686 - Evaluation in Home Economics Education
EDV 687 - Supervision in Vocational Education

INDUSTRIAL EDUCATION

Area I: Curriculum Development

EDV 678 - Selecting Teaching Materials
EDC 732 - Principles of Curriculum Construction

Area V: A Seminar in Instruction Devoted to Method of Teaching

EDV 534 - Organization and Operation of Part-time and Evening Classes
EDV 518 - Methods in Industrial Education (four hours)
EDV 529 - Evaluation in Industrial and Distributive Education
EDV 670 - Advanced Method in Teaching Vocational Education

VOCATIONAL EDUCATION

Area I: Curriculum Development

EDV 517 - Determining Teaching Content in Distributive Education
EDV 621 - The Business Curriculum
EDV 672 - Determining Content in Vocational Agriculture
EDV 685 - Home Economics Curriculum Construction
EDC 732 - Principles of Curriculum Development

Area V: A Seminar in Instruction Devoted to Method of Teaching

EDV 516 - Problems of the Coordinator in Industrial and Distributive Education
EDV 518 - Methods in Industrial Education
EDV 523 - Vocational Guidance
EDV 528 - Techniques of Teaching Distributive Education
EDV 615 - Problems in Business Education

EDV 670 - Method in Teaching Vocational Education
EDV 603 - Teaching Disadvantaged Youth and Adults
EDV 693 - Supervision in Vocational Education
EDV 694 - The Administration of Vocational Education

VOCATIONAL-TECHNICAL TEACHER EDUCATION: PROFESSIONAL SEMESTER COMMONALITY APPROACH

*ROBERT MEISNER**

Along with such popular phrases as "tell it like it is," "right on," etc., there is one that says "if it is going to be done, you are going to have to do it." In trying to identify the origins of these and other slogans of our time or to theorize as to why so many of our youth are captivated by them, one discovers that along with the sound there is an accompanying message (1). Both the sound--not the sound of silence--and the message eminate, it seems, from contemporary philosophy which concerns itself mostly with action and analysis. What follows, if applied to our profession, has bearing on whether none, some, or all of what needs to be done in vocational-technical teacher education "gets done."

Within the ranks of vocational-technical teacher education many of our professional colleagues and leaders, including the Center staff, have voiced concerns with what yet needs to be done. If one examines any random list of concerns, core curricular prototypes or comparable approaches are not only on most lists but moving up priority-wise. Blake's (2) core curricular objectives (objectives that I am in full agreement with), the Center's and other models presented and reviewed at the seminar are evidence of more than "just thinking" or "more rhetoric." To me, the message is "let's do something."

Smith echoes this message in *Teachers for the Real World* when he suggests that what is needed in teacher education is nothing short "of radical reform" (3). The entire book focuses on needed changes in teacher preparation with changes categorized as repair, reform or revolution. I'm sure our own orientations and philosophies would largely determine how the Core Curricular Model for teacher preparation developed by The Center for Vocational and Technical Education and alternate models might be categorized if given the opportunity to respond to an opinionaire. It seems lamentable that so much of our time and other resources have to be virtually exhausted to develop a "justifiable rationale."

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Careful examination of research done by the University of California to determine the current status of state-level organization reveals a trend toward reform in many states (4). These reforms, while not always sweeping, are occurring at an accelerated rate, sometimes happening almost overnight. As one might expect, in other states the opposite is the case; change is not occurring and the situation is static. My reason for citing the California studies is to point up the potential power, not to mention moods, that state governments along with professional organizations, accrediting agencies, etc. possess. What is implied? Our professional responses should not be ex post facto!

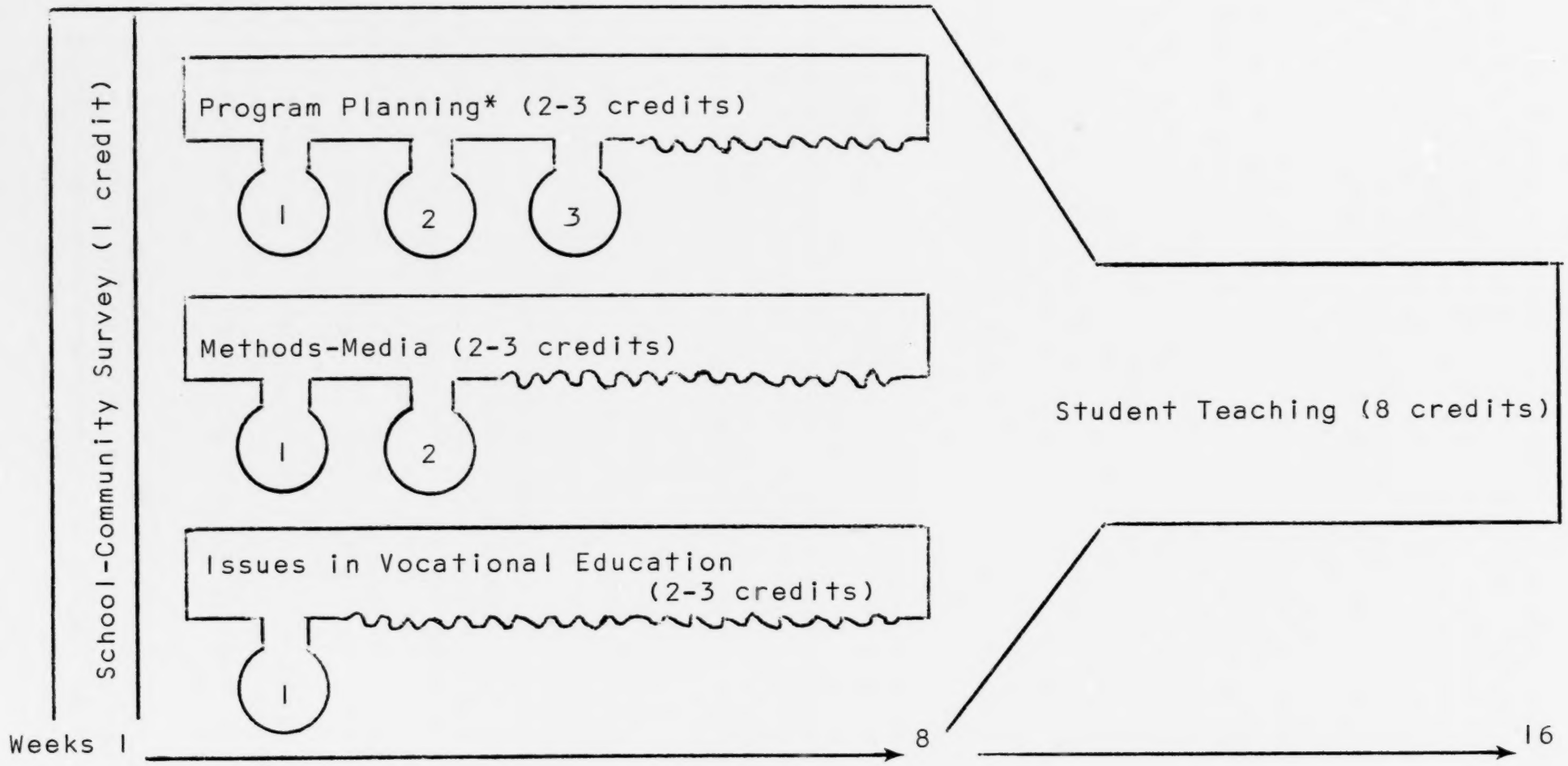
We as professional educators must somehow seek agreement on the competencies needed by all prospective vocational-technical teachers. These competencies should be based on supportive data reflecting more than normative research. With this kind of research, a more rational basis for the curricular innovation would evolve. Otherwise, our traditional programs stand in danger of being merged with or converted to liberal-arts-dominated, general teacher education programs. How? Two examples: 1) by requiring as part of teacher education an academic major, or 2) by insisting that core curriculum be so comprehensive that all teacher education would be encompassed. Consequently, I again find myself in agreement with Blake's (2) arguments for total integration of the vocational-technical service areas--not departments within a division or vice versa. Notwithstanding, the essentiality of distinct service areas, based on their relationship to technical subject matter (undergraduate and graduate master programs or as a major or minor in a doctorate program) is recognized. I would, however, posit that horizontal and vertical integration will be a much slower process in situations where the service areas are not within a unified organizational structure.

In keeping with our seminar topic "Emerging Teacher Education Curricular Models" I would like to describe an alternate model for undergraduate teacher education being studied at Kansas State University. The proposed curricular model, somewhat similar to the core curricular approach, is built around a professional semester using a commonalities approach. The professional semester (see Illustration 1) offers many of the same advantages of the core model plus built-in flexibilities for accommodating diversified student interests and needs.

The professional semester would include student teaching, plus three offerings (common to all students in vocational-technical teacher education): 1) Program Planning, 2) Methods-Media, and 3) Issues in Education. Within each of the common or core courses, students would be able to meet in small discussion sections where relevant application of concepts and/or theory presented in the core classes could be made. To enhance the

ILLUSTRATION I

PROFESSIONAL SEMESTER COMMONALITY APPROACH



*Program Planning plus Small Group Discussion Sections (Examples Below)

(1) Agricultural Education

(2) Home Economics Education

(3) Business Education

opportunity for making more relevant applications, students would be expected to visit the center where their student teaching would be done prior to the professional semester. Equipped with guidelines on how and what to look for in the community and school, data from both primary and secondary sources could be secured for later use, e.g. completing practical exercises in small groups, simulating program planning cases, etc.

At the master's level, students would logically continue in their specialty, combining additional professional education courses with those of a technical nature. At the master's level we should not be overly concerned about meeting required courses but looking more for options selected from a list of suggested courses, taking into account students' competencies, awarenesses, as well as courses already taken. This approach, described as a matrical of concepts approach, would help to identify "concept voids" for the purpose of arriving at ways of providing for student needs, not solely on the basis of course work; but it would encompass practica, internships, field experiences, field study, independent study, etc.

At the doctorate level, there seem to be various opinions within the profession as to what constitutes a comprehensive program. Too often it is a campus that has all the service areas. Blake (2) has described another type of comprehensiveness and has suggested that a number of the benefits accrue when service areas are brought together in a single department as has been done at Colorado State University, Kansas State University, *et al*.

At the doctoral level, courses at Kansas State are built around functional categories, i.e. administration, occupational experience supervision, supervision of student teaching, etc. After examining content within a comprehensive vocational-technical education framework, concepts and principles could then be applied to the various service areas. This advantage plus the opportunity to conceptualize interrelations and the opportunity to interact with other students enhance the total experience even more. To accomplish this, faculty assume teaching assignments on the basis of their own strengths as related to the functional categories, i.e. administration, etc. Offering a Ph.D. in Education with a broad or comprehensive major in Occupational Education also affords the opportunity for minors in research, curriculum, college teaching, administration, counseling and guidance or adult education.

Our faculty has supported a change in designation from Vocational Education to Occupational Education. The change in name connotes a greater degree of comprehensiveness, making it easier to deal with "reimbursed program" or avoid some of our "hang-ups"

related to the respectability of practical arts, vocational education, etc. To accommodate exemplary kinds of programs, we have added an Occupations Education dimension to our program. Occupations Education focuses on providing for orientation, exploration plus simulated and real experiences appropriate for students at the elementary and middle school level.

In addition, associate courses outside the college of education from allied disciplines, e.g. economics, sociology, etc. plus a bonafide internship insure additional comprehensiveness. In fact, I would look askance at any doctoral program in vocational education that did not offer a bonafide internship.

In summary, it seems imperative that we as professional educators in vocational education seek to identify commonalities, rather than uniquenesses. For without this base, curricular models or prototypes (core or comparable) will be just another "idea," resulting in little if any change. In closing, I raise the BIG question: do we want to change?

REFERENCES

1. For examples of social analysis done on these and related tendencies, see Allen J. Moore's *The Young Adult Generation*. New York: Abingdon Press, 1969; and Ross Snyder's *Young People and their Culture*. New York: Abingdon Press, 1969.

2. Blake, Duane L. "Objectives of the Core Curricula in Vocational Teacher Education--Operational Vistas." Address prepared for The National Vocational-Technical Teacher Education Seminar, St. Louis, Missouri, 1970.

3. Smith, Othaniel. *Teachers for the Real World*. Washington, D.C.: American Association of Colleges for Teacher Education, 1969. p. 9.

4. See *Study of Perceptions of State-Level Administration* and *The Current Status of State-Level Organization*. Berkeley, California: School of Education, University of California, 1967.

WHAT SHOULD BE TAUGHT IN THE CORE OR INTERDISCIPLINARY CURRICULUM

*W. R. MILLER**

INTRODUCTORY STATEMENT

Perhaps it should be clarified that the "core," "integrated," or "inter-service area curriculum" about which we are speaking refers to the professional education subject matter the application of which is related more closely to vocational education than to the total field of education. In a baccaleaurate program, this type of content comprises approximately 10 percent of the degree program, while at the graduate level these types of subject matter experiences may comprise from 50 percent to 100 percent of the program.

A. Professional Education Experiences Related to Vocational Education at the Baccaleaurate Level.

1. Examples of content which could be presented through unified or core courses would be as follows:
   a. historical developments
   b. Philosophical bases
   c. programs and issues
   d. formulation of objectives
   e. selection and organization of subject matter
   f. instructional methodology
   g. instructional technology
   h. student evaluation
   i. program organization and administration
   j. program evaluation
   k. securing and utilizing manpower data
   l. occupational analysis

2. A major assumption is the vast majority of competencies needed at the preservice level by all vocational education classroom personnel are the same.

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3. Therefore, theoretically, all content could be presented through core courses or courses taught through an interdisciplinary approach.

B. Advantages and Limitations of Core or Interdisciplinary Approach.

1. I believe that we must consider more than the professional education subject matter experiences of our prospective teachers. The total student, as a complete educator, and the experiences necessary to produce him must be considered.
   a. We wish our prospective teachers to identify with other areas of vocational education beyond their specialties.
   b. We wish them to realize that the professional competencies which they are developing are appropriate for all of vocational education, not just a specific field such as agriculture, home economics, or business education.
   c. However, we must avoid some of the shortcomings of general professional education, i.e. failure to recognize the need for specific and relevant examples; the motivational value of a service area specialist with whom the student can identify.

2. Therefore, even though it would be possible to teach all of the professional subject matter needed by vocational teachers in core experiences through an interdisciplinary approach, I believe that it would be unwise.

C. Presenting Professional Subject Matter Related to Professional Education Through an Interdisciplinary Approach.

1. Having indicated that I thought it would be unwise to try to develop all preservice vocational teacher competencies through an interdisciplinary approach, I am obligated to indicate ways in which the challenge might be more appropriately met.
   a. I believe that a desirable mix could be brought about through team teaching in order to permit the interactions of persons preparing for various areas of specialization and at the same time provide the desired application to the field in which the student plans to teach.

      Our own institution has not moved in this direction for a variety of reasons, none the least of which is the matter of determining load on the

basis of shared course responsibility. Also the scheduling and flexibility of staff required by such an approach is a complex matter.

b. A second approach, although I would judge it as less desirable, is to select courses for which there is less urgency for specific examples to the student's teaching speciality, i.e. history and philosophy, occupational analysis, program organization and administration, or programs and issues. These course experiences would then be taken at the same time by students from various service areas. Any of the staff, with adequate review, should be able to teach the course with appropriate supplementation by other members of the faculty.

These "across-the-board" experiences interspersed with professional course work in the teaching speciality can do much to meet the profession's need for highly qualified personnel who have a broad perspective of vocational education, while at the same time meeting the student's desire for a relevant preparatory program aimed at initial job demands.

D. Balance Between Professional Education Course Work Taken on an Interdisciplinary Basis and a Specific Service Area Basis.

1. Thus far I have limited my remarks to the preservice program which typically has "classroom teaching" as the end goal. Also I have limited my remarks to the specialized professional education related to vocational education. The following chart indicates the relatively small proportion of the baccaleaurate program to which we are addressing our attention:

Baccaleaurate Degree in Vocational Education

General Education	45-60 sem. hrs.
Teaching Field (major)	30-40 sem. hrs.
General Professional Education	10-12 sem. hrs.
Specialized Professional Education	9-12 sem. hrs.
Student Teaching	6- 8 sem. hrs.
Total	120 sem. hrs.
	(minimum permits 20 hrs. elective)

2. If I were to specify an appropriate mix, it would seem to me that approximately 30 percent of the professional education related to vocational education should be provided in an integrated setting (students from all service areas grouped together and taught by a professional who identified with the total field of vocational education). We at UMC have an initial core experience for undergraduates--F190 Programs and Issues in Vocational-Technical Education.

3. Another situation in which preservice professional education related to vocational education must be directed is that in which an intensive preparatory experience of perhaps two to six weeks in length must be provided for occupationally competent persons who enter teaching without benefit of a college level teacher preparation program.

   We have recently been involved in the design and conduct of a three-week workshop for beginning vocational teachers in several service areas who were grouped together for this initial professional education experience. The following outline represents topics covered.

Introduction

1. Enrollment & Orientation
2. Organization of Education
3. Financing Public Education
4. Professional Teacher Organizations
5. Services of the State Department of Education - Vocational Division
6. Student Organizations in Vocational Education

The Teacher's Role

7. Teacher Acts Related to Classroom Behavior Traits
8. Legal Responsibilities of the Teacher
9. Teaching Responsibilities

Occupational Analysis

10. Introduction to Occupational Analysis
11. Developing Objectives
12. Purpose of Blocking an Occupation
13. Identifying Operations
14. The Informational Topic
15. Procedures of Course Organization from an Analysis
16. Gagne's Eight Steps of Learning
17. Relationships between Forms of Analysis
18. Selecting Textbooks
19. Sources of Instructional Materials
20. Selecting Learning Activities
21. Operation Sheets
22. Job-Assignment Sheets
23. Relationships between Instruction and Production
24. Informational Assignments
25. A Card System of Organizing a Course of Study

Teaching Methods

26. Teaching Aids and Devices
27. Techniques of Micro Teaching
28. Organizing a Demonstration
29. Presenting Informational Content
30. Critiquing Via Videotape

Evaluation

31. Purpose of Evaluation
32. Elements of a Good Test
33. Performance Testing
34. Principles of Test Construction
35. Observing and Evaluation
36. Assigning Grades

Maintaining Pupil Control

37. The Student
38. Techniques of Controlling Student Behavior

In the design of this preservice experience, we were freed from tradition and permitted to ask "What is the vocational teacher's role" and "what competencies does he need for initial entry and success?"

Perhaps this is the model that needs to be expanded for all preservice programs.

E. Professional Education Experiences Related to Vocational Education for the In-Service Development of Professional Personnel.

1. Existing core of teachers who have had no interdisciplinary teacher education experiences.
   a. Obviously there are many teachers who have not experienced an integrated or interdisciplinary approach who need experiences which will permit them to interact and become acquainted with personnel, programs, and issues in all facets of vocational education.
   b. Many of these teachers are preparing themselves to assume new roles. Most of the career roles in professional education outside the classroom teaching, i.e. supervision, administration, curriculum development, instructional technology, research, teacher education demand a broadened perspective.

2. Program Developments at UMC for In-Service Development of Vocational Education Personnel (Graduate Degree Programs).
   a. It is in this area that we at UMC have concentrated. The departmental faculty has formally established a program at the master's degree and Certificate of Specialization levels in--Administration and Supervision of Vocational and Technical Education. In addition, the doctoral program which is considerably more flexible, would permit a major in the total field of vocational education with emphasis in such areas as curriculum, research, instructional technology, college teaching, etc.
   b. A total of 10 interdisciplinary courses are offered which are relevant to any specialized graduate program but which will form the major component for the more generalized interdisciplinary graduate program in vocational education.

Interdisciplinary Professional Courses

F308 Coordination of Cooperative Education

F321 Vocational Guidance

F365 Occupational Analysis

F403 Curriculum Construction for Cooperative and Adult Vocational Education

F406 Foundations of Adult Education

F410 Seminar in Practical Arts and Vocational-Technical Education

F411 Philosophy of Practical Arts and Vocational Education

F415 Occupational Surveys

F451 Measurement and Evaluation in Vocational Education

F459 Administration and Supervision of Vocational and Technical Education

WHAT SHOULD BE TAUGHT IN A CORE OR INTERDISCIPLINARY VOCATIONAL TEACHER EDUCATION CURRICULUM

*GEORGE L. O'KELLEY, JR.**

What should be taught in a core or interdisciplinary vocational teacher education curriculum is a question which requires more than a casual answer. One answer based on prejudice and a protectionist point of view could be diametrically opposed to another which is based on considered logic and grounded in valid research. Let us not overlook the possibility that one's logic in reality may be indefensible and the research utilized totally invalid. Either way the answer one comes up with may be highly suspect. I am afraid my own conclusions on the question, no matter how often and hard they are reshuffled, reanalyzed and reviewed, always reflect the experiences and convictions of a professional lifetime in vocational teacher education. This experience began as a teacher in a University Demonstration School and included time as a supervisor of student teaching, itinerant teacher educator, college instructor, U.S.O.E. specialist, graduate school instructor, department head and division chairman. Such learning is often painful but it is also rather permanent in nature.

There is one point in this discussion with which I agree wholeheartedly and without reservation. In the interest of efficiency and quality programs every effort toward consolidation which results in better teachers and the removal of all unnecessary overlap and duplication should be encouraged. On the other hand the mere act of consolidation just to be different deserves no support among experienced teacher educators. There is no magic elixir in just collapsing established and functioning departmental and course boundary lines unless the resulting product--the classroom teacher--is better.

The aim of preservice vocational teacher education programs is: 1) to prepare teachers who can operate efficiently and effectively as a teacher in conducting a quality instructional program, and 2) to lay the groundwork for further and continuous growth and development as a member of the teaching profession.

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This is not only a major undertaking but within time limitations usually identified with tight college schedules a task of almost monumental proportions.

The typical undergraduate teacher education program includes 30 to 40 quarter hours or 18 to 24 semester hours of professional education course work including student teaching. This means every minute must be utilized advantageously. In that context the interdisciplinary approach makes sense. If it works the result is a professional teacher who can take over and get results. If it doesn't work the result is the wasted loss of another prospective teacher and a damaged institutional reputation.

At about this stage in my reflections on this problem I always recall a conversation several years ago with a principal of a small community school. He recounted his experience with the beginning vocational agriculture teacher on his faculty the past July. The young man had asked for a conference in the school office and then calmly asked for directions regarding access to the former teacher's records and files, school records and student files and various curriculum data. The young teacher then went about his work and at the end of the first day of school in September came by to report his program underway. The principal then contrasted this performance with that of five other beginning teachers on the same staff (all graduates of the same university) whose inability to provide an organized instructional program or even to accept serious responsibility for fitting into a systematic program forced the concerned principal to hold "teacher education classes" for them three afternoons per week until he was exhausted. His question was: "Why this difference in these beginning teachers?" Of course, the answer was that the vocational agriculture teacher had been prepared as a teacher while the others had merely been exposed to a series of classes and experiences. This is the great danger confronting us all--just exposing students to a curriculum instead of developing their competencies to operate as teachers as a result of their experiences. I'm afraid that my own experiences tell me that we must carefully utilize every minute of the few hours we have students under our direction toward the end that they can perform as teachers rather than merely harp the jargon of the cult.

I think much of that which goes into the making of a competent vocational teacher can be accomplished effectively--perhaps more effectively--with the interdisciplinary curriculum approach. In this category I could justify the inclusion of such areas as:

1. Educational psychology--including the study of human growth and development, learning theory, etc.

2. Educational Philosophy

3. Guidance and counseling theory and practice (hopefully of the functional kind)

4. Direction of youth programs

5. Teaching media, including not only theory but also the mechanics involved

6. Evaluation of student progress and program achievement

On the other hand I believe quite strongly indeed that at the undergraduate level and operating within the time limits assigned some problem areas must be handled carefully and judiciously by specialists experienced in and professionally responsible for the production of highly specialized teachers, i.e. Homemaking, Business, Trade, Distribution, Agriculture, etc. In this area belongs developmental work in:

1. Identification of program objectives and projection of instructional objectives.

2. Curriculum planning and the development of curriculum materials.

3. Teaching techniques and procedures appropriate for specific instructional programs involved. (This should not be interpreted to mean that many techniques are essentially different for different programs. The same techniques will work equally well in many different programs but often the mechanics of adaptation may be quite different.)

4. Supervised teaching experience. Experience has taught me that when it comes to curriculum planning, lesson planning and teaching performance the instruction should be as specific and as carefully controlled and directed as possible. If I had to choose between indoctrination and failure in the initial teaching experience I would choose indoctrination as the lesser evil. At least the student teacher will survive indoctrination and at a later date try again. If his early efforts at teaching are not satisfying and rewarding he likely will not come back for more.

At the graduate level I take almost exactly an opposite point of view. If as an undergraduate the student moved into teaching easily and without trauma he will develop confidence and a professional desire to advance. In graduate school he is entirely capable of the give and take, the critical analysis and philosophical evaluation of many opposing inferences or hypotheses

preparatory to drawing a conclusion. Expose him to the interdisciplinary curriculum and the critical analysis of associates grounded in other disciplines! He can take it in stride and benefit from the experience. He has confidence and best of all a background of experience on which to base his thinking. I support the interdisciplinary approach at the graduate level wholeheartedly and think we should explore all possibilities here.

Even at the risk of being misunderstood I wish to point out one of the fallacies of attempting to plan an undergraduate vocational teacher education curriculum on a core or interdisciplinary base simply because certain commonalities can be identified in a task analysis of teacher performances in different service areas. Of course, many of the tasks required of different kinds of vocational teachers can be stated in exactly the same terminology! On the other hand the same tasks are required of the first grade teachers, the English teachers or the social science teachers. If we are going to construct an undergraduate core curriculum for all prospective vocational teachers we may as well prepare for the next and inevitable step--a core curriculum for all teachers without regard for any area of specialization, including vocational education.

ACCOUNTABILITY THROUGH COMPETENCE

*HENRY A. TEN PAS**

RATIONALE

At the close of the Nineteenth Century Herbert Spencer achieved a reputation as "the greatest intellect since Aristotle" and asked the question "What knowledge is of most worth?" He showed the inseparable relationship between curriculum organization and the aims of Education. "Can we discover what subjects are of most worth and, therefore, receive first emphasis in the curriculum?" he asked. Then he replied, "Only if we know the kind of educated person we want to produce." Many authorities agree that Spencer was chiefly responsible for launching the modern era of curriculum reform.

Today, in Vocational Education, we are further pursuing this theme. We have committed ourselves to placing the useful before the ornamental, as did Spencer. We have validated Alfred Lord Whitehead's thesis that Education must contain both basic knowledge and how to do something with the knowledge--that is, to combine techniques and knowledge. Emphasis has been placed on behavioral objectives, or if you wish, performance objectives. The purpose of such objectives, according to Thorwald Esbensen, is to make it clear to teachers, students, and other interested persons what it is that needs to be taught or what it is that has been taught. Such objectives stress performance, list the conditions, and state how their accomplishment can be measured.

"What should be taught in a Core or Interdisciplinary Education Curriculum" is the topic at present. Again, the inference to the question is, What knowledge is of most worth? Can we discover this and place it first in emphasis in the curriculum? Obviously, it must be done and is being done. What are the signposts that point the direction of how, and the degree to which this is accomplished?

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Today we are raising the question again of Knowledge For What? Spencer stressed subjects; Dewey added process; Whitehead asserted that the knowledge and know-how process are inseparable; the target today is knowledge for certain competencies.

In addition to the commitment to competency, we need to change the logic emphasis. Essentially, curricular reform is conducted from the viewpoint of experts--those learned persons at universities, state departments, and national levels who are in positions of responsibility--people like ourselves. These constitute the logic of the learned and are usually looking to knowledge from the past and then applying it. Such curricular revision has its primary emphasis on product (subject matter) and as such reflects tradition. Such products are indeed essential today, but are they of most worth? Is the subject the end or a means to a more desirable end?

Curricular revision in Vocational Education today goes beyond product. It includes the logic of the learned but begins with performance. Such performance should be stated in terms of competencies needed by the learner, and should be arrived at with the learner. It stresses the importance of motivation by the learner in being part of the process. The learner knows he possesses certain competencies, is progressing to a greater degree in these, and is reaching out for new competencies. This approach is from the logic of the learner. It stresses process, in that the subject material is a means to an end; namely, to enable the learner to perform a defined competency. The performance itself is part of the process; it is part of the motivation; it is the evidence of the product; it is of most worth; it is relevant. It places the person and his performance ahead of the subject or the product.

THE PROBLEM

The educators of the Twentieth Century have answered Spencer's question and in so doing have added another chapter to curricular revision and from Dewey in How We Think, to Burton in Supervision, and in hosts of modern curricular materials, instructional objectives have been stated in terms of the logic of the learner. What then remains?

Authorities in Vocational Education can agree upon certain topics or subjects that are of most worth. Students who enter the teacher preparation program anxiously await word from the establishment as to what they should know and what they should be able to do. Teacher educators usually tell these learners--and usually do so in terms of subject content. It has been the pattern for too many years--those who know telling learners what they should learn. By the time the subject has been covered, there is

little or no time to pursue application in performance. It is assumed that the learner knows little or nothing when he enters the program, he acquires all the knowledge he needs in a 2 x 4 x 4 year program, and then he is placed on the job. The learner must wait until he is on the job before discovering the relevance of his formal schooling. Once again, the product has been emphasized and the process underemphasized, and the relevancy for the learner has escaped him.

The problem then is, that, while there may be compatibility between the logic of the learned and the logic of the learner, more often than not there is incompatibility.

The task is to find where compatibility exists. The steps are to inventory the competencies the learner has upon entering the program, state the agreed-upon topics of the learned, and map out a program toward mutually agreed-upon competencies which the learner has yet to attain.

WHAT TO DO

Competency-based performance by the learner is the mutual goal of both teacher and student. On the one hand, we have a group of learned persons who are organizing a system for maximum accountability. On the other hand, we have a group of learners who are striving to attain behavioral proficiency. What kind of a system will allow maximum learner relevancy? The individualized learning system based on competencies seems to hold the greatest promise.

A TYPICAL INTEGRATED CORE

A THESIS

An individualized learning system provides an inventory of competencies when a learner enters, a plan for the strengthening of existing performance, and the acquiring of new competencies at different learner rates.

The commitment to common learner-acquired competencies is primary and the individualized learning system is a roadmap to achieve these. What are the common roles which must be performed by future vocational teachers and leaders?

THE COMMON ELEMENTS

Occupational analysis techniques have identified the common and unique roles in the duties of teacher coordinators of cooperative programs of all services. Cotrell has presented a *Design*

For Developing A Model Curriculum For Teacher Education (3). Personnel at The Ohio Center have identified 237 performance elements in the duties and functions of teachers of conventional in-school laboratory programs (2). Ward, along with 160 present leaders of vocational education in Oregon and a national panel, has identified 11 competencies from a list of 50 (7). Heilman consolidated and defined the 14 common tasks performed by vocational personnel at different position levels (5). Courtney and Halfin, in a 10 state study, identified a common core of curricular experiences for the teachers of occupational subjects. A theoretical teacher model was used and a factor analysis technique was employed (4). Gunderson and Troftgruben have summarized the common learner experiences during their internship in The Oregon Program.

Common elements are the various roles, tasks, and competencies stated in learner terms. The next task of professionals is to use these as targets and integrate the essential knowledges into performance objectives.

INTEGRATION OF COMPETENCIES, ROLES, AND CONTENT

When the content of organized and systematic instruction can be integrated with and toward the performance based competency, the learner acquires meaning (relevancy). Each role of the professional is a pattern of many competencies and knowledges. Those common to all areas should be defined first; those unique to a speciality later. The learner sees the relationship between that which applies broadly and then chooses specialization in terms of his own competence and knowledge. The specific then has more meaning because it has wider application in the category of principle rather than fact. From general to specific to see the breadth; from specific to general to test universality.

In terms of vocational personnel Table I integrates competencies, roles, and topical content. The performance items are based on a consolidation of 16 case learners. The topics are those identified across service area specialization. Studies have identified the various roles.

OFF CAMPUS CENTERS ESSENTIAL

The university setting is skewed to the subject matter, most college teachers stress subject matter competence as being of primary importance, and as such, expect such competence from students. If professional performance in field-based programs is to be the primary goal of vocational education personnel, these learners must have a large percentage of their time away from the campus. The prospective vocational teacher-coordinator-director,

must perform in a field setting. Performance in differentiated roles consisting of teacher aides, interns, regular teachers, and other specialized staff should be provided. The cooperative planning by differentiated staff in those centers will more readily bring the learner to the mutually agreed-upon performance at each level.

THE MISSION

Teacher educators of vocational personnel are capable of combining the logic of the learner and the logic of the learned. They are able to organize for maximum accountability as managers of scarce resources and make learning relevant to the learner. In order to satisfy both criteria, the undergraduate and graduate instruction should be organized on a competency based approach.

The individualized learning system holds the greatest promise of answering what knowledge is most worth for what? It assesses the student's ability and plans toward mutually agreed-upon competencies.

The use of field-based centers for preparing teacher aides, interns, teachers, and specialized roles can combine the systematic instruction with the expected performance. This broadens the base beyond that of a beginning teacher in a setting where competencies are demonstrated and can be performed by the learner.

TABLE I - INTEGRATION OF COMMON COMPETENCIES, ROLES, AND CONTENT
IN
INCREASING LEVELS OF PROFICIENCY AND COMPLEXITY

COMPETENCIES	DIRECTOR OF LEARNING ROLE	DEVELOPING PERSONNEL ROLE	SUPERVISING ROLE	RESEARCHING ROLE
BE ABLE TO:				
Organize and Use Local Advisory Committees.	Request the local school administration and board to organize Advisory Comm. The purpose of Ad. Comm. The steps in setting up committee The value of people with substantive knowledge.	Understand the social class structure of the local community as it relates to students enrolled in vocational classes. Promote and maintain adult vocational programs ----------	Ask committee to assist in organizing occupational work experience programs.	Understand similarities and differences between two or more educ. philosophies (i.e.) similarities and differences between goals of general & special educ.
Interpret the V.E. Program to teachers, parents, students, and community.	Conduct follow-up studies for purposes of determining the effectiveness of instruction.	Interpret the vocational programs to administrators.	Organize vocational programs for special students.	Proposal writing for funds and reimbursement.
Relate the occupational education instructional program to other areas of the school curricula.	Provide specific information to groups of students concerning the nature and requirements of occupations.	Use directive counseling techniques to help students solve personal and social problems.	Know the special state requirements for vocational facilities.	Make use of programmed learning materials.
Coordinate the activities of the occupational staff.	Curriculum work for special and occupational.	Articulated programs in Voc. Ed. (post-high school level - others).	Youth programs for all groups.	Disadvantaged and needs of special students.
Work with Ed. Admin. to initiate and maintain occupational programs.	Use the existing local school administration to initiate and maintain the vocational programs.	Coordinate the common activities of all occupational programs - develop a service area core. (Evaluation of local programs).	Direct the activities of all occupational groups for harmonious relationships. (Make use of state plan).	Change teaching style (teacher-centered to student-centered during one lesson.

TABLE II - INTEGRATION OF COMMON COMPETENCIES, ROLE, AND CONTENT
IN
INCREASING LEVELS OF PROFICIENCY AND COMPLEXITY

COMPETENCIES	DIRECTOR OF LEARNING ROLE	DEVELOPING PERSONNEL ROLE	SUPERVISING ROLE	RESEARCHING ROLE
BE ABLE TO:				
Establish and maintain effective working relationships with trade, labor & other agencies.	Assist students in conducting occupational surveys and obtaining employment data for community.	Coordinate with guidance groups.	The organization and administration of Voc. Ed.	Vocademic blend for interdisciplinary concepts.
Conduct evaluations of Voc. Educ. Programs.	Follow-up of students.	Evaluation techniques.	Behavioral objectives.	Clincial supervision.
Develop criteria for and evaluate facilities and equipment needs in occupational educ. programs.	Multiple use of shops, laboratories, and classrooms.	Prepare joint instructional budgets for occupational areas.	Obtain the cooperation of available communications media personnel.	Assess the reliability of teacher-made tests.
Effectively express oneself both orally and in writing.	Make a classroom lesson meaningful to the individual student.	Take the initiative when dealing with other teachers.	Make use of the innovative provisions of the Voc. Act of 1963-1968 amendments.	Understand the history and development of Voc. Education.
Locate and use community resources in program planning and operation.	Use resource persons in classroom and shop.	Assist in the planning of career days, career cruise, similar activities.	Youth programs as community liaison.	Develop clusters of offerings.
Identify and interpret into meaningful programs the community labor market and students' needs.	Relate the daily lesson to community data and inventory students' needs.	Coordinate with employment offices and personnel.	The teaching of English, Math, & other areas in your speciality.	The emerging occupations and special students' needs.

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Teaching Strategies For

Core Teacher Education Courses

TEACHING IN AN INTERDISCIPLINARY VOCATIONAL TEACHER EDUCATION CURRICULUM

*BEVERLY CRABTREE**

Since as early as 1917 with the passage of the Smith-Hughes Act there has been concern that teacher competency in the vocational areas is determined in part on how well the institutions of higher education have prepared these teachers to teach. Thus, money was provided and continues to be provided for teacher education and improvement at both the preservice and in-service levels. Traditionally the teacher education program in vocational education has been divided according to the various service areas and the prospective vocational education teachers have had little if any opportunity to interact with their peers in vocational areas other than their own. Too often each of the vocational service areas has had its own "little empire" and interaction among these vocational areas has been limited or nonexistent for often no organizational structure existed for facilitating cooperation among these various service areas.

However, as the result of recommendations by The President's Panel on Vocational Education, the Vocational Education Act of 1963 introduced a unified program approach for vocational education rather than the segmented approach. The Vocational Education Amendments of 1968 again emphasized this dimension. If this mandate is to be carried out revisions are in order for our vocational-technical teacher education program and this means as teacher educators we have or are going to have to change. Most of us have had experience in only one service area of vocational-technical education because we have come through the "traditional" teacher education program. However, if we are preparing the vocational-technical teachers for tomorrow we must become knowledgeable about the other service areas and we must also provide opportunities for our students to become knowledgeable in these. One approach being utilized in various higher education institutions is the introduction of core courses for teachers or prospective teachers of vocational-technical education. The introduction of such courses at both the preservice and in-service

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levels can cause a small crisis! Who is going to teach these courses? Remember most of us have had experience in only one service area! What are students like in these other service areas? What experiences have they had? We could go on and on with such questions.

The topic under discussion is: How shall teacher educators teach a core course? Questions have been raised which relate to the organizational structure of the course, methods which might be used in teaching such a course and possible evaluation techniques. In general, it would seem that the instructional strategies utilized by the teacher of a core course would be essentially the same as those used for any other course. However, the amount of emphasis on selected methods might vary. A teacher of a core course would probably utilize more "bridging techniques" because his students represent the various vocational services. For example, video recordings could be utilized effectively in providing examples and experiences which some of the students have not experienced directly. These taped sequences could be recorded by the students and/or teacher educator and would provide a common frame of reference for all the students. This approach could provide for more relevant learnings rather than merely "talking about" the concepts. The teacher of a core course would probably utilize more resource persons representing the various vocational services for most teacher educators have had experience in only one service area. Opportunities should be provided for frequent interaction among students from the various service areas. To summarize, the teacher educator should be concerned about bridging the diversity among the students and plan the instruction accordingly. However, is this not the role of any teacher in any classroom? In other words I do not believe the teaching of a core course is that much different.

The question no longer is, should we have an interdisciplinary vocational teacher education curriculum? The question now is, how can we best implement this concept in our institution?

For the next few minutes I wish to share with you what we are attempting to do at the University of Missouri-Columbia. In July, 1968 the Department of Practical Arts and Vocational-Technical Education was organized in the College of Education and this Department includes the service areas of agricultural education, business education, distributive education, home economics education and industrial education. In addition to a Department Chairman each of the service areas has a coordinator responsible for supervising program development within that particular area. The Department was established in an attempt to facilitate a greater degree of interaction among the various practical arts and vocational-technical service areas and to provide an organizational structure for interdisciplinary research and program development.

At the preservice level a core course, "Programs and Issues in Practical Arts and Vocational-Technical Education," has been developed and is being offered this semester. This course, designed for junior and senior students, was developed by a committee composed of representatives from each of the service areas and was approved by the faculty members in the Department. Because of faculty load allocations the decision was made to have one or two of the Department faculty members responsible for this course for any designated semester rather than the team teacher approach. However, the individual responsible for this core course is expected to utilize faculty members from all the service areas as resource personnel throughout the semester. Thus, the students in the class are exposed to all the service areas as the result of faculty participation and interaction with the students from the various areas. In addition this course is also available to students not majoring in one of the vocational areas but who may be preparing to be secondary teachers in another subject area. Emphases are on the examination of present and developing vocational programs, the operation of these programs and the issues which today's teachers are facing in the areas of the practical arts and vocational-technical education. The course is organized around four major units which are:

I. The Practical Arts, Vocational-Technical Education and Society

II. Existing and Emerging Programs in the Practical Arts and Vocational-Technical Education

III. Operation of Programs in the Practical Arts and Vocational-Technical Education

IV. Issues in the Practical Arts and Vocational-Technical Education

More specifically the course objectives are that the student:

Understands the forces in our society which prompted the development of the practical arts and vocational-technical education programs in our schools.

Understands the existing and emerging program offerings in the practical arts and vocational-technical education and recognizes areas of joint responsibility and cooperation.

Understands the local, state, and federal administrative structures relating to the practical arts and vocational-technical education.

Identifies and analyzes current issues in the field.

Within each of the four major units of study specific objectives are identified and the appropriate assignments, references and study questions are indicated. Suggestions for references were and continue to be made by the Department faculty members. Bases for evaluation include objectively scored test results and oral and written reports.

The methods used in teaching this course are varied with emphasis on opportunities for interaction among students and between students and faculty. Group discussions and panels or symposiums are helpful for increasing communication among the students. The instructor for this course must be able to use practical and relevant examples from the various service areas and this means some diligent homework by the instructor. Hopefully this undergraduate course will increase the understanding of and respect for the other service areas.

At the graduate level our Department offers several courses which are relevant to all vocational and practical arts education personnel. Examples of these interdisciplinary courses are:

Coordination of Cooperative Education

Vocational Guidance

Occupational Analysis

Curriculum Construction for Cooperative and Adult Vocational Education

Seminar in Practical Arts and Vocational-Technical Education

Philosophy of Practical Arts and Vocational Education

Occupational Surveys

Administration and Supervision of Vocational and Technical Education

Measurement and Evaluation in Vocational Education

In addition to these courses, which would be appropriate for degree programs in any of the service areas, our Department offers specialized courses for students who wish to obtain a major area of emphasis in any one of the program areas.

Last year I was one of the two teachers for the course entitled Seminar in Practical Arts and Vocational-Technical Education. The decision was made to plan this seminar around issues in practical arts and vocational-technical education. Various issues were identified by the course instructors and these were

presented to the class. Opportunity was provided for the students to make additional suggestions. Because of limited time it was not possible to study all the issues presented, thus, the students selected the issues they wished to study during the semester. After these issues were determined each student selected the one issue he or she wished to study in more depth with other students in the seminar and for which they would be responsible for presenting to the total seminar. The six issues selected and studied during the semester were:

1. Accountability in practical arts and vocational-technical education

2. The place of the practical arts in education as related to general education

3. The place of the practical arts in education as related to vocational education

4. Vocational education as an element in manpower policy

5. Discrimination in employment and practical arts and vocational-technical education

6. Vocational education in the junior colleges

Because of their interest in interacting with students from other service areas an attempt was made to have students from the different service areas represented in each of the six groups. Each of the groups was responsible for searching the literature for readings relevant to the issue, suggesting references for the class members to read, and leading the class discussion relating to the selected issue. As the instructors of the class we attempted to direct the students to deal with the crucial dimensions of the issues. The students were required to identify and delineate the problems relating to the issue rather than attempt to solve the problem. In other words, the seminar was for the purpose of encouraging the students to seek information relating to the issues in vocational education rather than providing prescribed answers.

Evaluation of students was based on the students' ability to delineate the issues and on the quality of their discussion comments. At the end of the semester time was provided for the students to evaluate this seminar experience. The one major concern which they expressed was they believed that instead of having a variety of issues to discuss, it would be more satisfactory to have only one or two issues which would allow for more in-depth study of the issue. This semester the issue centers around vocational education for disadvantaged. Plans are being made for the students to have some direct experiences with selected economically disadvantaged individuals.

As a teacher educator I found the seminar to be very much of a learning experience for me. When I first approached my graduate advisees about enrolling for this seminar it was obvious that they were not thrilled to do so but felt obligated to do so because their advisor suggested it. However, at the end of the semester these same students expressed satisfaction with the course and stated that they learned so much from the seminar. They concluded by saying, "We think you should MAKE all your students enroll in the seminar." When questioned about what they had gained from the seminar all expressed some surprise that the other vocational service areas have some of the same areas for concern that their own area has. Even though each service area had not been studied in terms of its philosophy and purposes these students believed they had learned much about the other service areas as they interacted with the students during the discussion of the various issues. These students believed such a seminar facilitated communication among the service areas and such interaction would continue even outside the university setting.

Looking back I believe the key to the success of this seminar was student involvement for the students were active participants. They were learning from each other; they were talking with each other (notice I didn't say talking to); they were communicating and learning about and developing an appreciation for the contributions of the other service areas. The seminar appeared to be a "springboard" for this. We plan to strongly encourage, and yes, MAKE our students in home economics education enroll in similar seminars during their graduate program for here I believe is one example of how we can promote the concept of the unified vocational program and prepare our prospective teachers and our experienced teachers for this. If we really believe in the necessity of the cooperation among the service areas should we not be doing something about this at the university level? We cannot just talk about it and expect our graduates at either the undergraduate or graduate level to go to a community and cooperate in developing and teaching courses where a unified concept of vocational education is needed.

Another core course which has recently been developed at the graduate level is the course entitled "Measurement and Evaluation in Vocational Education." The concepts related to measurement and evaluation had been emphasized in separate evaluation courses in each of the service areas or had been included in seminars or offered as areas for independent study. After comparing the course content of these various courses dealing with evaluation it was concluded that much repetition existed within the Department. A representative from each of the vocational service areas was appointed to a committee which was assigned the task to develop an evaluation course. This task has been completed and the course has been approved by the Department faculty and is scheduled for this school year. Such a course includes concepts relating to the

development of evaluation procedures and the construction of evaluation devices for vocational education. Emphases are on evaluation of student progress, improvement of instruction, and program evaluation for the service areas in vocational education. Evaluation concepts which are considered unique only to a particular service area will continue to be included in the specialized courses or through independent study in the specific program area in which the student is enrolled. However, the major or basic concepts of evaluation will have been included in the core course thus reducing the duplication of course content in the Department.

We have not solved all our problems for at the present time we are wrestling with the problem of an already crowded curriculum at both the undergraduate and graduate levels. How do we "squeeze in" any more courses? Does this mean we are going to have to give up some of our courses in our own specialized service area and if so, how many? We are presently looking very critically at our curriculum to determine how we can cope with these problems.

The approaches described above are selected examples of what is being done at one institution, the University of Missouri-Columbia. Certainly there are other approaches which could be followed in achieving the objectives and I am certain each of you could share such examples with us. One factor to consider is that total reorganization of a program, formation of a department, or the development of core courses will not guarantee cooperation among the various service areas. These might facilitate cooperation or they may have no effect, for the students and teacher educators involved in the vocational education program are the determining factors. We think we have a good beginning at our institution in order to better meet the challenges of the Vocational Education Amendments of 1968.

PREPARING FOR AN INTERDISCIPLINARY APPROACH TO VOCATIONAL TEACHER EDUCATION

*BERNARD T. FAGAN**

A new era in vocational and technical education came into being with the passage of the 1963 Vocational Education Act. With it came new responsibilities and new challenges to all persons involved in vocational education. Many of these responsibilities have fallen on those in leadership roles. Throughout the nation, a broadened program has been planned to better serve the needs of business and industry and to better serve the economic and social needs of people. Teacher educators find themselves in a crucial position in implementing these plans. This paper attempts to identify some of the changes that teacher educators may find helpful as they attempt to fuse some segments of the traditional multipath programs strictly bounded by limits of specific service areas into a program of interdisciplinary teacher education for vocational education.

In a survey concerning trade and industrial teacher education in the 1970's by L. C. McDowell, reported on in the last *NAITE Journal*, 86 chairmen or heads of T and I teacher education institutions in 40 different states were asked to note the extent of their agreement or disagreement on 13 statements.

Responses were received from 80 institutions, a 93 percent return. The second statement in the series reads "Many trade and industrial teacher education programs will tend to merge into 'vocational' teacher education programs during the 1970's." Of 76 who responded to this item, 24 or nearly 32 percent "strongly agreed." Those who "agreed" numbered 36 or 47 percent. There were seven who "disagreed" and three who "strongly disagreed." Six expressed "no opinion." Of those who had an opinion, 60 or 86 percent were in agreement as to the truth of the statement and 10 or 14 percent felt that this statement did not reflect the future. It appears to be a decisive opinion of those who are in a position to wield considerable influence on teacher education

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programs that the preparation of trade and industrial teachers will become interdisciplinary in nature in the coming decade.

One learns from his experiences, and it is on the basis of these experiences that one acts. A casual observance of teacher educators will show that a great majority of them are persons of considerable experience in vocational education. This is especially true in the area of trade and industrial education; it is likely true of some of the other service areas. Experience can be a valuable resource as one attempts to solve new problems. On the other hand, it may be an inhibitor, for in extensive experience, one often finds security. Change can be threatening to one who has already found his security in the not-too-severely challenged practices of the past.

One can find much security in the four-step lesson (preparation, presentation, application, and evaluation) widely used in trade and industrial education. Experience shows that the real key to the process is "preparation." If one has prepared completely himself and his students for an activity, the end result is usually satisfactory. As one thinks about teacher education of an interdisciplinary nature for vocational education, it appears that the key step is preparation of and by the teacher educator.

Getting the teacher educator prepared is a personal activity. Much of it takes place within the mind of the individual whose past experiences have given him notions of what is good or bad, what will work or what will not work. The experienced teacher educator finds himself caught between sporadic insistence on change (usually attributed to Washington sources) and the exuberant enthusiasm and threatening innovations by persons who are newcomers to Vocational Education (who didn't come up the hard way). It becomes increasingly obvious that traditional service area teaching of experienced teacher educators gives way to an interdisciplinary approach only when there is a predisposition to make such a change by those who are at the operational level.

The writer's experience may serve to illustrate the point. He began teaching before World War II in a junior high school program that had been selected by the Southern Association of Secondary Schools and Colleges as a participant school in experimentation with an interdisciplinary core curriculum. Here was a teacher, prepared to teach chemistry and physics in a departmental setting, assigned to 30 students in the eighth grade, with instructions to teach them English, social studies, mathematics and science in an interdisciplinary manner while centering around the life problems of each child in the class. After two years, the teacher concluded that the method was maximally effective when an outstanding teacher was paired with students of high ability (115 I.Q. and over) and that other combinations were inferior to

departmentalized instruction. With this memorable experience as background, this teacher, now a Trade and Industrial teacher educator, initially tended to view interdisciplinary teaching with some doubts. Interdisciplinary teaching in vocational education cannot reach its fullest potentiality until the teacher prepares himself to make a very positive approach to the new technique. One must remove one's own mental blocks brought on by those past experiences that tend to leave one unprepared for new tasks.

A second example may illustrate another facet of the relevance of past experiences and reluctance to change. Many people are aware of the current ecumenical movement during the last decade to merge many denominational church groups into one great church. The great barrier to the achievement of this goal was and is that individual denominations are not willing to surrender numerous beliefs characteristic of that denomination which set each apart from the other. The disturbing thought here is that achievement of a universal (interdisciplinary) church seems possible only at the lowest level of belief, rather than at the highest. The implication is that vocational education should work for interdisciplinary cooperation at the highest level of each individual service area and thus achieve an efficiency that transcends in efficiency anything which we now have in vocational education, especially as it pertains to teacher education. It must be the predisposition of every teacher educator to believe that this is possible. It is a necessary part of his preparation for interdisciplinary teaching.

The first step, then, would consist of preparing for interdisciplinary teaching in vocational education by having each teacher make a self-examination, making sure that his experiences and dedication to the past do not serve as a deterrent or a roadblock to an all-out effort toward new and better approaches to teacher education.

The second step in the preparation process was to remove the barriers of titles, terminology, and regulations. This task was begun some years ago at the University of Kentucky under the able leadership of Dr. Harold Binkley, Chairman of the Division of Vocational Education in the College of Education. Action was expedited by the existing organization in which all teacher educators of all service areas have long been members of a single department in a single college of the University. Teacher educators prepared course titles, objectives, and outlines of content of all teacher education courses to be taught. These were pooled for small committee action to determine possibilities of interdisciplinary cooperation which might be expedited through change of title, expanding of objectives, combining of content and other arrangements which might facilitate the training of teachers from more than one vocational service area. This small group process served a double purpose, for in the process, staff members

increased their effectiveness to work cooperatively on curriculum problems. The self-examination process was carried a step further; teacher educators of each service gained information and appreciation for programs of other service areas. Agreements were reached on title changes, objectives, and course content. Some courses were eliminated and others were added. Agreements were made for team teaching of some courses. In others, there was a direct transfer of material from one teacher educator to another.

The next step called for committee work of an interdisciplinary nature in which degree requirements at all levels and in all services were revised to take full advantage of proposed course changes. Correspondingly, teacher certification regulations were scrutinized and necessary adjustments were recommended in the light of the broader approach to teacher education in vocational education.

Another necessary step was that of providing for necessary changes in University Catalog listings--a monumental task presided over by curriculum committees, college faculties, University faculties, Graduate Councils and a miscellaneous array of persons who serve as protectors of the integrity of University offerings. Many who are empowered to pass judgment sometimes take a dim view of education courses in general and of vocational education in particular. (They can't quite accept the fact that almost all University training is vocational in nature.) Trade Analysis became Occupational Analysis, Organization and Operation of Business and Industrial Education Programs became Organization and Operation of Vocational Education Programs, Problems of the Coordinator in Industrial and Distributive Education became Problems of the Coordinator in Vocational Education, Principles and Philosophy of Industrial Education became Principles and Philosophy of Industrial Education became Principles and Philosophy of Vocational Education, Teaching Prevocational Agriculture (F.F.A. operation) became Youth Organizations in Vocational Education.

Once this part of the preparation was accomplished, the rest was comparatively easy. Teacher educators were well schooled on building a course around objectives and outlines upon which there had been early agreement.

A continuing part of the program is one in which teacher educators in each occupational service area are given opportunity to learn about other services through workshops, conferences, institutes, committee assignments, field trips, and in many other ways in which people meet together.

Some teacher educators who once spoke only one language--"trade and industrial education"--have become bilingual and are occasionally heard to speak "Vocational Education."

One teacher educator of vocational agriculture, who, under the old order of things, taught Teaching Prevocational Agriculture--a course in F.F.A. operation, in the Summer of 1969, turned to the new order and taught a broader version under the new title Youth Organizations in Vocational Education. The class members were sponsors of V.I.C.A. groups in the area schools and their extension centers. Much to the dismay of the writer, he succeeded to an amazing degree. He repeated the course in the Summer of 1970 in his usual efficient manner. This time it was much to the writer's great delight!

The broad practice of interdisciplinary teacher education in vocational education is here and now. If those who are now teaching reject the concept and refuse the practice, it is probable that others will implement the program. Interdisciplinary teaching cannot be rejected on the basis of efficiency for this is a factor yet unknown. Those who are now teacher educators have sufficient pooled experience to put the practice to the test. The most formidable barrier to making the test is the lack of a predisposition to act on the part of the experienced teacher educator. It appears that now is the time to readjust our mind-set, reorganize teacher preparation programs in the light of this new day, and exert our best professional effort to improve what now is. The vocational service area that benefits most may be your own.

HOW SHALL TEACHER EDUCATORS TEACH A CORE COURSE?

*E. EDWARD HARRIS**

When Dr. Edward Ferguson called and asked me to make a presentation on how to teach in the interdisciplinary vocational teacher education curriculum he suggested that it would be helpful to make reference to a particular core course or curriculum. Therefore, this presentation will be delimited to the preparation of teacher coordinators in cooperative vocational education.

My personal interest in preparing vocational education teacher coordinators for more than one U.S. Office of Education instructional program area began in 1963 when I entered the field as a distributive teacher educator. During this presentation I will attempt to explain what we actually did in 1964 to respond to the challenges inherent in the Vocational Education Act of 1963, and what we have done or are now in the process of doing to implement the intent of the provisions of the Vocational Education Amendments of 1968.

Our first attempt to design and implement an interdisciplinary vocational teacher education curriculum at Northern Illinois University was made during the 1963-1964 academic year. Plans for implementing the Vocational Education Act of 1963 were being made throughout the country. Preservice and in-service teacher education programs were being revised or started in institutions throughout the country to meet the anticipated demand for vocationally qualified teacher coordinators in both office and distributive education.

A similar situation occurred with the passage of the Vocational Education Amendments of 1968. Cooperative Vocational Education was to be expanded and all types of qualified personnel needed to serve as teacher coordinators.

We have now had six years experience at Northern Illinois University in preparing office education and distributive education teacher coordinators, but only one year of similar experience in preparing all types of cooperative vocational education

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personnel. However, the experiences we had from 1964 to 1969 have been extremely valuable to us this past year.

This presentation is based on the assumption that the major instructional functions of the vocational teacher educator include those identified in the three phase instructional system shown in Figure 1: 1) formulation of desired learning outcomes, 2) developing and designing learning activities, and 3) evaluation. Figure 1 identifies the elements within each phase and shows the relationship which exists between the three phases of the system. In the time assigned, I would like to explain how we have used this three phase system to design and implement our teacher education program at Northern Illinois University for the preparation of cooperative vocational education personnel.

PHASE I - FORMULATION OF DESIRED LEARNING OUTCOMES

We began the development of the curricula by carefully analyzing teacher coordinator activities so that essential competencies could be identified. The personal experiences of the designer and available reports and research studies relative to the activities performed by various types of teacher coordinators provided valuable job activity information. Lists of common and unique job activities and competencies were developed.

Based on the information available at this time, tentative curricula were designed for the preparation of both office education and distributive education teacher coordinators. However, from April 1964 until April 1965 a study was conducted to determine the critical requirements of office education and distributive education teacher coordinators and to ascertain the reasoned judgment reactions of teacher coordinators to selected issues concerning the operation of the secondary school cooperative education programs. Specifically, answers to the following six interrelated questions were sought:

1. What are the effective and ineffective critical requirements for office education teacher coordinators?

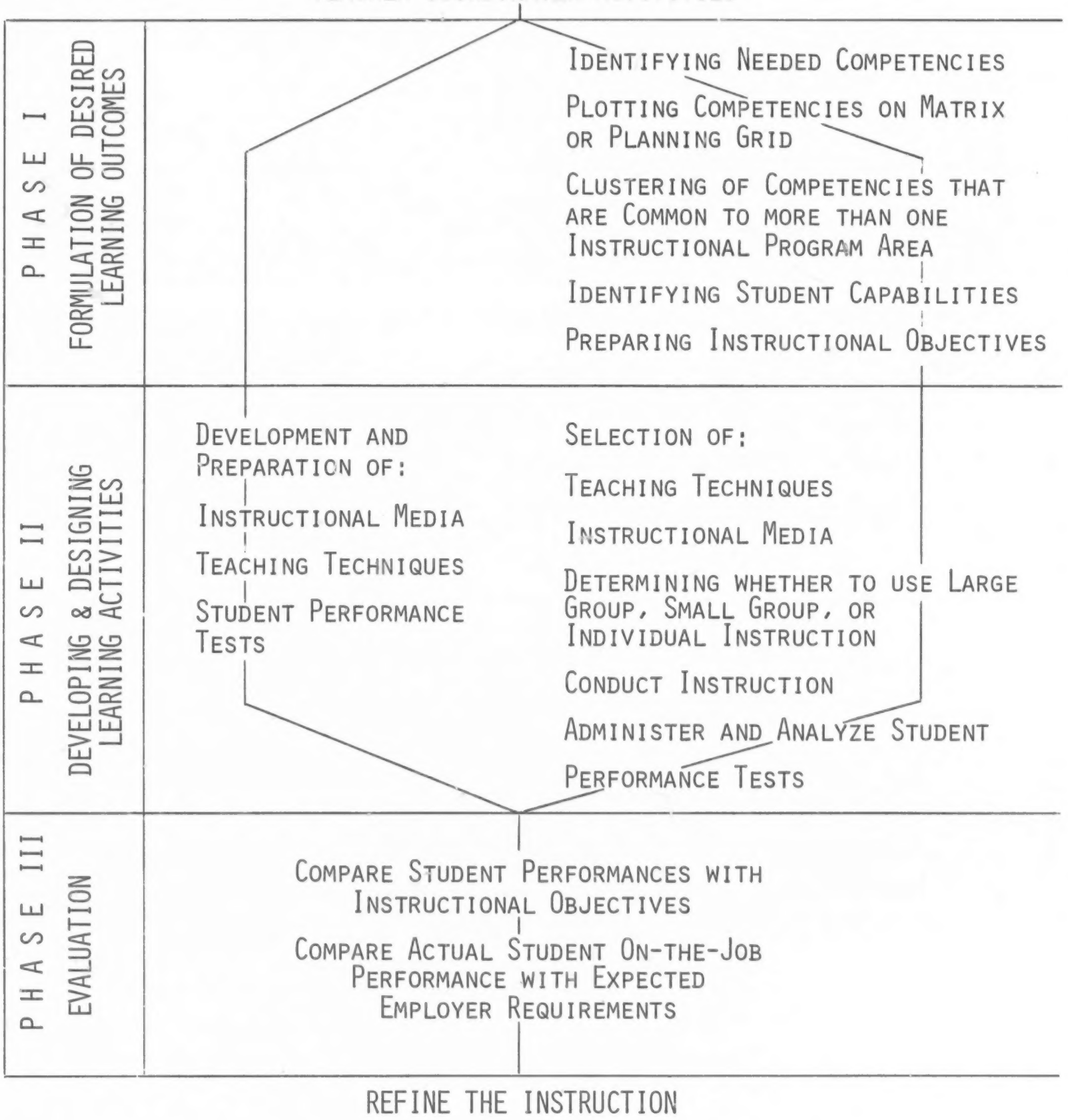
2. What are the effective and ineffective critical requirements for distributive education teacher coordinators?

3. What is the interaction of effective and ineffective behaviors with office education teacher coordinator, program and community characteristics?

4. What is the interaction of effective and ineffective behaviors with distributive education teacher coordinator, program and community characteristics?

FIGURE 1

DESIGNING A TEACHER EDUCATION CURRICULUM BASED ON TEACHER COORDINATOR ACTIVITIES


PHASE I
FORMULATION OF DESIRED LEARNING OUTCOMES
IDENTIFYING NEEDED COMPETENCIES
PLOTTING COMPETENCIES ON MATRIX OR PLANNING GRID
CLUSTERING OF COMPETENCIES THAT ARE COMMON TO MORE THAN ONE INSTRUCTIONAL PROGRAM AREA
IDENTIFYING STUDENT CAPABILITIES
PREPARING INSTRUCTIONAL OBJECTIVES
PHASE II
DEVELOPING & DESIGNING LEARNING ACTIVITIES
DEVELOPMENT AND PREPARATION OF:
INSTRUCTIONAL MEDIA
TEACHING TECHNIQUES
STUDENT PERFORMANCE TESTS
SELECTION OF:
TEACHING TECHNIQUES
INSTRUCTIONAL MEDIA
DETERMINING WHETHER TO USE LARGE GROUP, SMALL GROUP, OR INDIVIDUAL INSTRUCTION
CONDUCT INSTRUCTION
ADMINISTER AND ANALYZE STUDENT PERFORMANCE TESTS
PHASE III
EVALUATION
COMPARE STUDENT PERFORMANCES WITH INSTRUCTIONAL OBJECTIVES
COMPARE ACTUAL STUDENT ON-THE-JOB PERFORMANCE WITH EXPECTED EMPLOYER REQUIREMENTS
REFINE THE INSTRUCTION

5. What are the reasoned judgment reactions of office education and distributive education teacher coordinators concerning selected issues relative to the operation of the secondary school cooperative program?

6. What is the relationship of the reasoned judgment reactions of office education and distributive education teacher coordinators concerning selected issues regarding the operation of the secondary school cooperative programs to teacher coordinator, program and community characteristics?

The results of both the informal and formal investigation of teacher coordinator job activities, behaviors, critical requirements, and beliefs provided a sound basis for identifying needed competencies. Beginning in the Spring of 1965, after the competencies were identified, they were listed on a matrix or planning grid (see Figure 2).

Competencies which were needed by both the office education and distributive education teacher coordinators were grouped together and instructional objectives were prepared based on the anticipated student enrollees' capabilities. Learning activities were developed and designed, the curriculum was evaluated, and the necessary revisions were made. The curriculum for the preparation of office education and distributive education teacher coordinators consisted of the following four commonalities courses:

1. Organization and Administration of Office and Distributive Education Cooperative Programs

2. Coordination Techniques in Cooperative Office and Distributive Education

3. Individualized Instruction Techniques in Office and Distributive Education

4. Directed Occupational Experience

The competencies essential for teaching various subject matter areas were of sufficient number and complexity to justify separate basic subject matter methods courses. Students were encouraged to take one or more specialized methods courses before enrolling in individualized instruction techniques in office and distributive education.

In 1968, the National Advisory Council on Vocational Education released their report, *Vocational Education--The Bridge Between Man and His Work*. This report had a major impact on all

FIGURE 2

COMPETENCY AREA: GUIDANCE AND SELECTION OF STUDENTS

COMPETENCY	TYPE OF COOPERATIVE VOCATIONAL EDUCATION TEACHER COORDINATOR					
	D.E.			O.E.		
	Level of Development			Level of Development		
	1	2	3	1	2	3
Establish Sound Working Relationships						
Providing Occupational Information						
Describing the Program to the Students						
Counseling Students About Entering Program						
Gathering Information on Students						
Programming and Scheduling of Students						
Helping Students with Career Planning						

NEEDED LEVEL OF DEVELOPMENT: (1) EXTENSIVE (2) ACQUAINTANCESHIP (3) NONE

vocational education. We started to redesign our teacher education programs for the preparation of all types of personnel in the field of vocational-technical education.

We are now in the process of systematically reassessing our stated learning outcomes and sequences of instruction for all types of cooperative vocational education personnel. During the past two semesters we have had six different types of cooperative vocational education teacher coordinators enrolled in the two classes that will be used as examples during this presentation: 1) Organization and Administration of Cooperative Vocational Education, and 2) Coordination Techniques in Cooperative Vocational Education. We have found that, even though our competency planning grid has been expanded, a vast majority of the competencies which were common to office education and distributive education coordinators are also common to other types of teacher coordinators (see Figure 3).

PHASE II - DEVELOPING AND DESIGNING LEARNING ACTIVITIES

The learning activities Phase II of the instructional system (see Figure 1), includes the selection, development, and preparation of learning activities for teacher coordinators from more than one instructional area. Phase II activities can only be achieved if the unique and common competencies have been identified, specific behavioral objectives have been prepared, a sequence of learning has been planned, and instructional activities specified.

The teacher educator who is responsible for teaching commonity courses in vocational-technical education must readily accept the fact that he is a director or manager of learning and not a dispenser of knowledge. It is totally impossible for any one individual to provide all of the examples and illustrations that are essential in a commonalities class or curriculum.

At Northern Illinois University, we have used a wide variety of learning activities with varying degrees of success. We have been fortunate to have both the financial support and instructional resources essential to enable us to implement our program.

For this presentation I have selected what is considered as the first course for an aspiring teacher coordinator and one of the advanced courses. The first course is called Organization and Operation of Cooperative Occupational Education Programs and has the following catalog description:

> Overview of Vocational Education, changing philosophy and environment, planning and organizing new programs,

FIGURE 3

COMPETENCY AREA: GUIDANCE AND SELECTION OF STUDENTS

COMPETENCY	TYPE OF COOPERATIVE VOCATIONAL EDUCATION TEACHER COORDINATOR																	
	D.E.			T & I			Health Rel.			Home Econ.			Agriculture			O.E.		
	Level of Dev			Level of Dev			Level of Dev			Level of Dev			Level of Dev			Level of Dev		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Establish effective working relationships with Guidance Personnel																		
Providing Occupational Information																		
Describing the Program to the Students																		
Counseling Students about entering Program																		
Gathering Information on Students																		
Programming and Scheduling of Students																		
Helping Students with Career Planning																		

NEEDED LEVEL OF DEVELOPMENT: (1) EXTENSIVE (2) ACQUAINTANCESHIP (3) NONE

role of coordinator in implementing the many facets of occupational education programs.

Coordination techniques in Cooperative Vocational Education is one of the advanced level courses and has the following catalog description:

> Techniques of effective public relations, selection and placement of trainees, selection of training stations, development of training station personnel, working with advisory committees, solving problems faced by coordinators, follow-up activities, program development activities.

Both an entry level and advanced level course have been selected for this presentation so that the teaching strategies for both types of courses could be described. The instructional strategies do differ significantly in teaching beginning and advanced level courses in the preparation of teacher coordinators. However, many of the instructional materials generated by students in the advanced level classes can be used in the first level course. For example, a video tape showing a teacher coordinator launching a training plan with an employer and training sponsor that was prepared during the advanced level Coordination Techniques class can be effectively used in the beginning level Organization and Operation of Cooperative Vocational Education class. Students in the advanced level class are acquiring the competencies essential for launching a training plan while beginning level students have an opportunity to become aware of how a training plan is used in selecting and developing a training station.

The use of standard and battery-operated portable video tape television equipment is one of the most useful media for teaching both beginning and advanced level classes. We are fortunate to have two standard and one battery-operated television units in our department that we use consistently for the preparation of teacher coordinators.

Through video taping the case or incident method is even more effective than it has traditionally been. The case problem method is particularly well received by students in the advanced level classes. Cases and incidents which are based on experiences of class members when combined with those developed by the teacher educator serve as a relevant instructional package. A good case or incident should be genuinely interesting; it should contain issues on which opinion may vary; it should present events, objective facts and opinions from the view of one or more people involved in the situation. The case or incident should provide no more information than persons in the actual situations possessed, and the proposed solution should contribute to the growth of the students.

To illustrate one manner in which the case method can be used in the coordination techniques class, let us assume we have a case problem which is common to all 30 students enrolled in the class. The case had been distributed to the students the previous class session. Each student has studied the case and written his responses on a case problem worksheet which contains the following five-step procedure for solving cases:

1. Identify the true problem.
2. Identify the important facts to be considered with the problem.
3. List several possible solutions.
4. Evaluate possible results if each solution is followed.
5. What one solution do you recommend and why?

Before the class members arrive, the classroom is arranged into six work areas with five students in each circular table area. The class session begins by the case being presented in one or more of the following ways: role playing, television, tape recorder, and narrative explanation by student or teacher. Small group work starts once the case is clearly understood. Each of the six groups of five students examines all written answers and tries to define the problem and arrives at the best possible solution. Normally within a period of 15 minutes the small group work is completed.

Responses are secured from participants of one or more of the small groups on each of the five steps in the case problem procedure. Differences which develop between groups and individuals are frequently worked out by having students role play their preferred course of action. It is not unusual for one case problem to require three or more different role playing situations and consume over 90 minutes of class time.

During the early part of the course, considerable time may be required to assist the students in defining the problem. Once they gain this ability, small group work will be facilitated both in working on cases which are common to the whole class or unique to four or five students.

The teacher educator should experiment with the many possible variations in using the case method. It is a particularly excellent teaching strategy to use when a competency needs to be acquired in the affective or psychomotor domain.

Students enrolled in the beginning course for teacher coordinators of cooperative vocational education consistently indicate that they profit from the symposia and panel discussions. The discussants may be: 1) cooperative vocational education students and teacher coordinators; or 2) employers, training

sponsors and teacher coordinators; or 3) students, training sponsors, and employers. Normally, six or more individuals serve as discussants. These "Tell It Like It Is" sessions must be carefully directed by the teacher educator. Care must be exercised so that the class members don't feel the panel has been "loaded." The discussions can easily last a full class session. However, it is important that class members have an opportunity to ask questions at the earliest possible time.

Panel and symposia discussion sessions provide an excellent overview of how a cooperative program operates, the job of the teacher coordinator, how secondary or post-secondary school students view the various aspects of cooperative vocational education, and how training sponsors and employers react to the program. By providing this type of realistic learning atmosphere, the students are quick to feel that they are involved in a relevant learning experience.

Many different competencies in both the beginning and advanced courses for teacher coordinator can best be achieved through the use of various types of "buzz" sessions. For example, during the session on public relations, the students are asked to identify the techniques which are effective for the various publics involved in cooperative vocational education. Progressive "buzz" sessions are used to identify the factors to be considered when selecting a training station.

Consultants or presenters can play an important role in vocational teacher education. This past summer we offered one three-week workshop in which we used 27 consultants. Experienced coordinators, administrators, counselors, state staff, and university personnel are examples of the type of consultant personnel who are available. For example, state advisors for vocational youth groups make excellent presentations on the educational values of youth groups. Consultants can add a great deal of variety and enrichment to a course. The innovative teacher educator will draw extensively on the experiences of class members to enrich classroom discussions. By drawing on examples and illustrations from students and relating to the experiences of the students, class discussions become personalized and relevant. Particularly in advanced level classes this sharing and drawing on student experiences is crucial. The teacher educator who is attempting to teach a course in the interdisciplinary vocational teacher education curriculum by himself, without the benefit of team teaching or differentiated staffing, will particularly have to be skillful in drawing on the experiences of class members.

Both team teaching and differentiated staffing are ideally suited for the development and implementation of the interdisciplinary vocational teacher education curriculum. This past

summer we employed six additional part-time lecturers and four graduate assistants to assist us in implementing our program. The part-time instructors were primarily responsible for student contact type activities, while the graduate assistants assisted the instructors and master teacher. The graduate assistants worked with the secretarial staff, lined up and operated audio visual equipment, prepared and assembled instructional materials, and other instructionally related activities. The part-time instructors not only taught a class for which they were primarily responsible, but also team taught in other classes. Through this arrangement we were able to offer both a greater variety and better quality program of instruction.

Team teaching becomes increasingly necessary as the courses become more advanced and the proportion of the course which is common to all vocational education personnel decreases. For example, advanced sessions dealing with instructional materials, methods, and youth groups require more team teaching than a beginning class session on advisory committees.

The expertise required to develop and design learning activities for interdisciplinary vocational teacher education classes requires the time and effort of more than one person. Simulation activities, transparencies, television and tape recordings, bibliographies, slide and filmstrips, and other teaching aids must be developed or secured.

PHASE III - EVALUATION

The evaluation phase of the instructional system is simplified greatly once the behavioral objectives have been formulated. Performance in role playing, case problem, and class discussion activities is combined with the results of pencil and paper examinations and project assignments to evaluate student performance. Whenever feasible, materials prepared by students are duplicated and copies distributed to appropriate class members for future reference and use.

It is easier to compare student performance with the stated instructional objectives than to compare actual student on-the-job performance with expected employer requirements. Through our student teaching and placement program, we have been able to achieve positive evaluative information during the past few years. We are now anxious to assess the program we started this past year in the field of vocational education.

SUMMARY

The interdisciplinary vocational teacher education curriculum must be carefully planned and implemented. The teacher educator begins by formulating desired learning outcomes. Once the behavioral objectives have been carefully stated, he can then develop and design appropriate learning activities.

Buzz sessions, case and incident problems, symposia and panel discussions, role playing, television, term projects, and class discussions are teaching methods which have been successful in preparing teacher coordinators of cooperative vocational education. Team teaching and differentiated staffing are essential tools for implementing the instructional strategy phase of the program.

The program is evaluated both by comparing student performance with stated instructional objectives and actual on-the-job teacher coordinator performance with expected employer requirements.

TEACHING STRATEGIES FOR CORE TEACHER EDUCATION COURSES

*JAMES W. HENSEL**

The title "Teaching Strategies for Core Teacher Education Courses" suggests that we understand two major ideas. First, the term "strategy" reveals an art of devising, employing, or selecting alternative plans toward a specified goal. Second, the term "core" as used in core teacher education courses, implies an arrangement of basic topics to provide a common background for all students. I trust that by this time, we agree on the definition and implied concepts of both terms as we develop teacher education programs in vocational and technical education.

The problem, developing teacher strategies for core courses in vocational and technical education, is both very simple and very complex. It is very simple in theory since a sound teacher education program should provide the kind of experiences and background that will prepare him for a successful career in teaching. The problem appears very complicated when one attempts to provide the individual ingredients of a total program and operationalize the theory. There is no easy or simple strategy that each of us must adopt.

There are many confounding factors which must be considered as we look at strategies for developing core teacher education courses. Are we talking about graduate or undergraduate courses? Are these to be offered at the preservice level or are they at the in-service level? Will they be taught on campus or off campus? Do we need to consider state legislation and certification requirements? Do you have access to video tape, audio tape and visual equipment for individualized instruction? Do you have access to a computer terminal for computer-assisted instruction? These are just a few of the factors that tend to complicate a very simple question.

At the University of Florida we have a Department of Vocational, Technical and Adult Education. Within the department there are sections of Agricultural Education, Business and Office Education, Technical Education, Adult Education, and Health Careers

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Education. Within the Agricultural section, we have Extension Education and a direct tie-in with the College of Agriculture. The Business and Office Education section offers Business Education, Vocational Office Education, and a commitment to Family Finance or Consumer Education. In Agriculture and Business Education we have both an undergraduate and graduate program. In Technical Education, Health Careers Education, and Adult Education, we offer only graduate education.

The problem becomes one of attempting to structure certain core courses which would cut across the boundary lines of all vocational interest areas. One of the major objectives of our department this year is to take a look at all of the courses which are currently being taught in the department, their major objectives and to come up with some recommendations concerning possible overlap areas or areas which are now being missed.

How do we handle the various levels, vocational areas and objectives within the core courses? We do not feel we have the ultimate answer, but here is what we are now doing. We currently have three courses which serve as our core at the undergraduate level. The first of these is a 300 level course entitled "Principles of Vocational Education." This course covers the theories and principles of vocational education, stressing the development, social and economic values, purposes and scope of different programs of vocational education. This is a basic course for everyone preparing to teach any of the vocational subjects.

The second course, also at the 300 level, looks at the general methods in teaching vocational education. In this course, we study methods such as the lecture, demonstration, group techniques, the scientific method, the use of questions, teaching aids and devices, programmed instruction, teaching machines, preparing courses of study, lesson plans, and behavioral objectives. The use of tests in teaching and evaluation, utilization of the community as a resource and the supervised occupational experience as a part of vocational education is usually included in our core methods course.

The third course in the core program is a 400 level course which would normally come at the senior level, entitled "Program Planning in Vocational Education." This includes the principles and procedures of planning and organizing vocational education programs. Emphasis is placed on long-range planning and developing a total program including a course of study, teaching calendar, community surveys, the use of advisory groups and evaluation techniques.

These three courses are taught for the undergraduate student to give him a broad understanding of the total program in vocational education. Beyond these courses we have special methods

in each of the major sections in our department so students take an additional course which includes the special methods of teaching Business Education or Agricultural Education. The special methods course serves as the capstone for the general core courses.

The problem that many see in general core courses is the need to make each of them relevant to the student's specific vocational area. How can these courses have practical value in his classroom? Frankly, we are not as worried about this as perhaps we should be because we feel that the student himself is the best vehicle for direct application of general principles to his own area. Certainly a good student in Business Education can take a technique for supervised occupational experiences and make it relevant to a vocational office education experience. The general concepts are the same whether they are in business or in agriculture. The techniques for handling groups are generally the same regardless of service area. The three courses which I have just described are normally taught on a level which would include techniques that are applicable in all areas and the student makes much of the transition to his specific interest area. The students must become involved in the class and provide the major linkage between theory and practice. Principles and concepts of vocational education know no boundary line.

We follow much the same philosophy at the graduate level in our department. Nearly all of our graduate students enroll in a foundations of program planning for vocational education. Those who plan to go into administration or supervision are provided a special course for these topics, but there is no distinction made between the student who has come up through any of the different service areas.

At the graduate level, these people have had teaching experience and are now looking for administrative roles and therefore, need to know something about all the vocational service areas. Thus a class mix at this level is essential to provide the kind of background required of an administrator in an area vocational school, junior college, or at the high school level. They must have an intermix within each of these classes or the graduates will certainly return to their school system and administer the total program as they have operated a single service.

How are these courses handled at the present time? What techniques and strategies do we use which will make the general courses seem relevant and understandable for the student? First of all, students are encouraged to discuss the differences and similarities in their programs and are encouraged to get out and visit schools which operate all types of vocational and technical programs. They need some direct experience in order to understand their own, as well as other fields.

I do not agree that the professor must give illustrations in the language of each vocational service area or he will be "tuned out." The students have not "tuned us out" as we discussed vocational education. The students can make the class relevant through discussion, through working together, and through bringing up specific examples and illustrations as to how their service area would utilize a particular concept. The professor must be a director of learning and not the almighty prophet telling the student how it should be. He cannot lecture day after day without giving the students a chance to participate. More and more courses must be taught on a discussion or seminar basis even at the undergraduate level. Students must become more responsible for their learning under the direct guidance of a teacher rather than having it fed in day after day through a lecture or a textbook approach to learning. Those days are gone and unless the professor understands that students no longer want to be "lectured to," he will have considerable difficulty in keeping a class "tuned in." The professor must learn to participate and listen as well as talk.

Field trips can be a valuable tool but I do not mean the traditional class field trip, as such. It might be a small group field trip where two or three students visit a particular business or industry and report back to the class. The report they bring back may be video recorded or it may be on audio tape accompanied by 35 mm slides. We are moving away from the idea that worthwhile learning can only take place within the four walls of a classroom. The teacher must direct students into the community, out into the world to see how it is working, and to report back to the class some of their specific experiences. These techniques are particularly appropriate at the graduate level since these students have the maturity and desire to make learning an exciting experience. They also have the background of experience which will provide them with a base for further learning.

One of the major things we need to do, particularly at the graduate level, is to shake each student out of his narrow box and get him thinking about more than his specific service area. Take a look at how tomorrow's teacher must function in a total school and community setting. The classroom is not an isolation ward kept sterile and free from outside contamination. When students arrive in the classroom, they do not and cannot "tune out" the rest of the world for an hour while you teach them "your subject." The subject must be related to and be a visible part of the world at large.

Give each student an opportunity to move ahead on his own, work in small groups, and these could be developed by service area if the student wants depth in his subject area. They are challenged to explore the community, explore the literature, explore the school system, and report back to the class in terms of a verbal, oral, video, or several other types of reporting techniques.

To make this discussion more realistic to you, let me describe a couple of typical classes which I taught last year that might give you an idea how some of these things work. First of all, I taught an off-campus class in "Methods of Teaching Vocational Education." This is the undergraduate or 300 level course described earlier in this paper. The enrollment was made up of 25 students and their backgrounds were as diverse as any you will find in your classrooms. There were cosmetologists, bricklayers, carpenters, a TV repairman, a washing machine serviceman, a mathematics instructor, an English teacher, two driver education teachers, a coach, an elementary teacher, a junior college student, a history teacher with a master's degree, an auto body repairman, a diesel mechanic, an instructor in charge of a truck driving school, and an instructor of aeronautical engineering technology in a junior college.

We studied methods in vocational education and the class had one thing in common: They all wanted to know "what methods of teaching are the most effective with youth and adults in vocational education." We built on this commonality, shared our experiences, developed individual programs, and worked together in formulating a concept for teaching vocational education. We gave demonstrations; we broke into small groups and did some individual study. We utilized a video tape recorder with a micro-teaching session and visited some innovative programs. We not only learned methods in teaching vocational education but we all gained a respect for the many dimensions of vocational education. In addition, the students from the mathematics, English, and history disciplines challenged some of our basic principles and concepts of vocational education. We were forced to think of the total picture and abandon the narrow, single discipline attitude that many members brought into the classroom on the first day. This was a real learning situation and yet it was relevant to each of their problems because the students made it relevant.

This past summer I taught a course in "Administration of Vocational Education" to a class that had as much variety as did the "methods" course. In this graduate course in administration of vocational programs, we had a vice-president of a junior college in charge of vocational education, and two university students who were taking one additional course before they went out to begin their first job of teaching. We had a guidance counselor, a mathematics instructor, a dean of boys at the secondary level who generally was a peace keeping officer this past year. Also enrolled was a registered nurse, a business education teacher, a county director of vocational education, and an instructor in a junior college.

Here again, we had one thing in common. This was to study together and learn to administer effective vocational education programs. In this class we called in some expert resource visitors,

such as a director of the local manpower and a State Department of Education official. Each student selected a term project and individual help was given to each class participant as he developed his subject. These projects varied from a plan for a junior college vocational education program to developing a simulated administration experience folder.

I must emphasize that neither the undergraduate course nor the graduate course dwelled upon the detailed skills required in the vocational service areas. We discussed content but avoided many of the "how to do it" skills which applied only to narrow areas. Too many courses get bogged down in a discussion of minute detail or irrelevant obscurities.

As we look at the total spectrum of vocational and technical education, we have many more things in common than we do that are unique. We have guarded the bastions of our individual service areas so long that we find ourselves building programs that overlap and are redundant. The students are telling us this and they have told us this for many years and we have not listened. When we talk about methods of teaching vocational education, how can we distinguish or justify a difference between methods of teaching business, agriculture, or distributive education? Is an understanding of the lecture method any different for one of these than it is the other? Do group techniques work differently with different vocational service areas? Isn't the concept of a supervised occupational experience or cooperative experience the same with all of us when we talk about the fundamental principles of this experience? If you want to talk about such things as discipline in the classroom, planning programs, developing behavioral objectives, I would challenge you to tell me why each of the service areas are so different. We have found that the advantages of the core curriculum in vocational and technical education far outweigh any disadvantages. We are going to do more of it in the future.

Most of the problems in core courses are not in the content or the attitudes of the student. The problems lie within the professors who feel that they must maintain a certain course or area distinction and fight for survival. I wonder sometimes if we are not more interested in maintaining the status quo and our own historical class content than we are the development of a student who can function in a modern school situation. The major problems in developing teaching strategies for core courses in vocational and technical education lie not with the student or course content but with you--the teacher educator.

VOCATIONAL CORE TEACHER PREPARATION

*JOHN L. ROWE**

The following are suggestions for the preparation of vocational teachers to function satisfactorily in a vocational core program. These suggestions are based on the premise that there is a community of interest in vocational aims and objectives. Just as the statement has been made that everyone is an English teacher, we extend that philosophy to insure that all vocational education teachers have a commonality of purpose. We are vocational teachers first, and second, we are subject matter specialists. Therefore, a Vocational Core program will work successfully if vocational teachers have the following course content, background, and experience available in our Philosophy of Vocational Education course which enrolls about 20 to 30 students each semester. Perhaps I should state here that our vocational teacher education programs are offered on the undergraduate level. Graduate courses are available, however, in this vocational foundation, for those holding bachelor's degrees but not yet certified as vocational teachers. Briefly, then, is the content of our course in Philosophy of Vocational Education:

1. Vocational teacher trainees should understand the purposes and objectives of vocational education. They should be thoroughly familiar with the philosophy of vocational education and its relationship to general education.

2. They should acquire a background in the history of vocational education; the Smith-Hughes Act, the George-Dean Act, the George Barden Act, and the Land Grant Act.

3. Vocational teacher trainees should be thoroughly acquainted with the Vocational Education Act of 1963 and with its Amendments of 1968.

4. The most important consideration in the preparation of any vocational education teacher is that he recognizes that first he is a vocational education teacher and a subject matter teacher second. He does not operate as an island unto himself; therefore,

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every effort is made, in the Philosophy of Vocational Education course at UND, to include a broad understanding and a sound appreciation of the subject matter aims in a variety of vocational education fields. To accomplish this purpose, a very special effort has been made to have specialists in the various fields of vocational endeavor speak to the class. We therefore sponsor a considerable array of speakers each time the course is offered. An instructional unit is involved with each specialist's presentation.

First, the students are grouped into panels to present information and to lead class discussion in the field represented by the specialist. For example, in distributive education, the panel may have four or five members. They are given reading lists on current trends in distributive education so as to determine the nature and content of this vocational field. Based upon their reading and study, they present their findings to the entire class. Incidentally, while the distributive education panel is doing its homework, there are other vocational fields panels who have been assigned similiar duties and responsibilities and will present their reports later in the course.

After the first panel (in this case distributive education) has given its report, then a distributive education specialist, or specialists, speak to the class. These specialists may include the teacher-trainer for distributive education at UND, and/or the State Supervisor of distributive education. They discuss opportunities in the field, and the problems and issues associated with the area of vocational specialization. During the presentation by the experts in the field, an opportunity is also provided for questions and discussions as well. After the speaker's presentation, the students may revise their reports concerning the role and function distributive education plays as part of the total education family and the vocational education family in particular.

The procedure outlined above is also used for each subject matter area in vocational education and includes the following:

1. Agriculture
2. Home economics
3. Industrial arts
4. Office education
5. Trade and industry

The University does not have vocational education specialists in some of the newer and related vocational education fields. To develop an understanding and appreciation in these newer fields, we have additional panels and speakers in the following areas:

1. Vocational rehabilitation. The speaker for vocational rehabilitation is a blind person, and is the supervisor of special

services for the blind in North Dakcta. This unit includes a tour of the State Rehabilitation Center on the UND campus.

2. Practical nursing. The instructor in charge of the practical nursing at Deaconess Hospital in Grand Forks speaks to the group. This program is administered through our state vocational school at Wahpeton.

3. Health education. The tremendous growth of the health occupations in vocational education has made it necessary to acquaint the students with the needs in these fields. Tours of local hospitals and medical centers provide an overview of the health occupations.

To accomplish the aims and objectives listed above would provide what some might consider to be an adequate vocational education background, and at least a beginning for developing a philosophy of vocational education. We consider it our additional responsibility, however, to provide a broader understanding of the breadth and depth of vocational education, and as a result we also have panels and specialized speakers in the following areas:

1. Disadvantaged youth, including those served through special education. Perhaps we should change the name of that area to students with special needs. But in North Dakota we are still using the term disadvantaged youth. We have a panel presentation and an expert from the area of special education. Special education in North Dakota has achieved a high degree of excellence, and our teacher educators and state supervisor in that field have been most willing to cooperate with our students enrolled in philosophy of vocational education.

2. Manpower programs. Sometimes we forget that there are vocational programs operated or administered through other government agencies. Our speaker for manpower has usually been the director of the Manpower Development Training Programs for the State of North Dakota.

3. Vocational Guidance. One of our big hang-ups in North Dakota is the lack of vocational counselors. There are many counselors in the high schools, but they, I regret to say, are academically oriented because the program, when instituted shortly after Sputnik, placed the emphasis on the sciences, math, and foreign languages.

We are, however, experiencing a change for the better, but much needs to be done in this area. We also bring to the class the state vocational guidance director to acquaint us with the needs in that particular area.

VOCATIONAL TEACHER PREPARATION (COORDINATION)

Teachers will function adequately in a core program for vocational education if they are knowledgeable about the special problems associated with coordinating techniques. Our core teachers will not be in a position to appreciate our students' problems unless they obtain this knowledge through formal classroom instruction and related experiences. Therefore, we have a special course in Coordinating Techniques. Among the topics included are the following:

1. The community survey. Students are instructed how to conduct community surveys and the purpose of such surveys.

2. The work station. Work stations are available in most fields; they identify what is considered to be a desirable work station.

3. Student selection for placement in cooperative programs. There are many problems associated with student selection. Should this be based upon grades alone? Expertise in a particular field? Personality? Financial need? Interest?

4. Training agreements. Most schools have training agreements with firms cooperating in training. These agreements are perused in depth.

5. The advisory committee. What are its duties and responsibilities? How can it function effectively in cooperative programs?

6. Orientation to the job. What provision is made for the student to ease into his new work assignment? How is the employer to orient the individual into his duties and responsibilities? Usually the coordinator works closely with the employer in this respect.

7. Supervision. What is the role of the supervisor? How does he evaluate the student? To what extent is the employer involved in supervision? To what extent are his comments evaluated in terms of the grade (if one is given) the student receives?

8. Public relations. The public should be informed and educated concerning the special relevance of cooperative occupational experience programs.

9. Workmen's compensation, labor laws, and unemployment compensation. This involves an in-depth study of these regulations as they apply to both the state and federal level.

10. The related class. Most vocational education programs have a related class in the school system. Upon what should the content of the related class be based?

11. Relationship of local programs to the state department. Many times the state vocational education department has certain training requirements that must be fulfilled. The students in coordination techniques should be thoroughly familiar with the state requirements in North Dakota as well as in adjacent states.

12. State forms, records, and reports. At first glance, one might conclude that you would need to be an accountant to keep adequate records. It is not a difficult procedure if the vocational teacher-to-be has been exposed to these forms.

13. On-the-job placement. How does one find work stations? On what basis does he select the work stations?

14. The teacher certification requirements in the various states. North Dakota prepares coordinators for many other states; actually we are in the export business insofar as teacher education is concerned. We prepare far more teachers, in several vocational fields, than we need for our own particular state.

15. How to conduct job analyses.

16. Equipment and physical facilities for the various programs in vocational education. This can be partially accomplished through visits to selected vocational schools.

A broad overview is also given in the coordination class concerning such topics as: vocational clubs (youth organizations, simulated programs, and vocational adult programs).

GROUP DISCUSSION SESSION RECORDERS

A sincere appreciation is given the following recorders who gave of their time and energy to note the points of interest and the important discussion areas which took place in the small group discussion sessions. Although their notes are not included in these proceedings, they have been related to the seminar.

Sidney Borcher
Research and Development Specialist
Center for Vocational and Technical Education
Ohio State University

Ronald Daugherty
Project Director
Center for Vocational and Technical Education
Ohio State University

Mary Helen Haas
Professor
Colorado State University

Doris E. Manning
Consultant
Center for Vocational and Technical Education
Ohio State University

Marjorie S. Stewart
Professor
University of Kentucky

Vera P. Tisdale
Assistant Professor
University of Alabama

Summary Papers Of The Seminar

THE IMPACT OF THE CORE TEACHER EDUCATION CURRICULA AS SEEN BY THE: RESEARCHER

*CALVIN J. COTRELL**

My comments will be limited to the impact of major concepts of this seminar on the participants. I will refer primarily to the interim report of The Center project on the career-oriented, performance-based guidelines which were presented for developing relevant core and specialized curricula. But also I will comment on the department heads' and teacher educators' presentations relative to objectives of core courses and teaching strategies for core courses.

Generally speaking, I am pleased wi[illegible]he nature of the impact of all three of these topics and the valuable information that has been obtained through presentations and discussions. It appears that the seminar will be mutually beneficial for The Center's project and for the seminar participants.

The remainder of my remarks will be divided into three parts to communicate what I presently see as the impact of the seminar for the one-third of the participants who generally accept the ideas and concepts, the one-third who have mixed emotions, and one-third who basically reject the concepts to which I refer.

The participants accepting the concepts may be described as those who: 1) are currently under pressure in their state to establish performance criteria for certification of teachers and for evaluation of teaching, 2) must prepare performance goals for the teacher education courses they teach, 3) represent emerging departments of vocational teacher education, 4) learned of several core course possibilities through the presentations yesterday, 5) learned of strategies for teaching core courses, and 6) have indicated interest in having their institution collaborate with The Center in developing and testing model curricula.

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The one-third of the participants for whom the impact resulted in mixed emotions may be like the guy in the old story who saw his mean mother-in-law driving his new Cadillac off a cliff. These persons may be those who: 1) believe performance-oriented, relevant teacher education looks and sounds good, but believe those thousands of specific performance objectives will be lots of hard work; 2) preach the writing of performance goals for secondary level courses, but are not practicing by having performance goals for their own teacher education courses; 3) claim they want to try core offerings but the institutional setting with separate service oriented departmental lines precludes such attempts; and 4) find core teaching strategies intriguing but believe it would be too much trouble to change from the old lecture and discussion techniques.

The approximately one-third of the participants rejecting many of the concepts presented and discussed during the seminar may be those who: 1) turn performance elements directly into course content and curricular models; 2) saw the performance basis as mechanistic and containing many omissions because they could not see the development of all domains of performance objectives before one has content for a course; 3) want to base instruction on teaching skills that are proven to change learner behavior--which would be the ultimate (Incidentally, I support those persons and urge them to get started researching.); 4) find it easier and best to stick to the courses they have offered for 30 years; 5) find their job security seems threatened by measurable accountability through performance-based evaluation of teaching; and 6) seemed to be threatened by loss of identity through offering and teaching core courses.

In closing, I have been most pleased by the seminar participants' expressions of interest in the model curricula project and their acts of kindness toward the seminar staff. I am most appreciative of the present and former seminar personnel who performed so well during the project presentations Monday morning. I am referring to the ladies on the team--Anna Gorman, Shirley Chase, and Marilyn Molnar. I wish to indicate a special thank you to Jim Bennett who was assistant investigator for Phase I of the project and was away from The Center for over a year, but was willing to help with this seminar. Also, my special thanks go to Charles Doty and Roger Wilson for their assistance which meant they had to leave the pressures of brand-new positions to help us at this seminar. Appreciation is also extended to Drs. Edward Ferguson and Anna Gorman, seminar co-chairmen, for all the patience, service, kindness and hospitality they have provided those of us on the project staff. We are most appreciative, too, for the many excellent suggestions and ideas received from seminar participants.

THE IMPACT OF THE CORE TEACHER EDUCATION CURRICULA AS SEEN BY THE: DEPARTMENT CHAIRMAN

*GEORGE L. O'KELLEY, JR.**

I guess that my real problem in reacting to this seminar stems from that fact that I really love my job and my work. I get too involved in it and I may overreact; if so, I hope you will understand. Actually, I should say I am not a department head of vocational education. We have a slightly different setup; I am a division chairman. We have four specific departments which we have fought to retain; we do have a comprehensive program as the University of Georgia was funded a doctoral E.P.D.A. program. We think that we are training teachers first and foremost, and so I speak from that context. As a matter of fact, I am thoroughly in accord with everything that has been said here, except as it may apply to some implications for revision of curriculum, which I will touch on.

I think that I would want to make clear, from my point of view at least, that we in vocational teacher education do not stand in any danger of being absorbed by the rest of teacher education. Just the opposite is true, I think, from where I stand. I come from a very fine college of education, in my opinion, and they are moving real fast. I think that they are looking to us to keep up, and we are fighting very hard to keep up and to take advantage of everything that they have to offer. Actually, in the elementary education area there is a funded project that is doing practically the same type of things, making the same approaches that we are in vocational education. We in vocational teacher education are going to fit nicely into the context of things at the university if we manage to keep up with our colleagues.

The other thing I would want to point out is the danger of making career analysis based strictly on the traditional program all on the assumption that this is vocational education of the future. It certainly is not! Vocational education is moving terribly fast and the movement tends to support the kinds of things that are being discussed at this seminar. I have just

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this fall been belabored for assistance with the development of a K-6th grade curriculum to orient teachers in this direction, to prepare guidance coordinators for middle-school exploratory programs; to plan workshops for middle-school, prevocational-type teachers; to prepare high school vocational administrative supervisors and curriculum guides for multi-occupational curricula; and the list goes on and on. So vocational education is definitely on the move and it's a dynamic movement. I do not know when we will peek out, but we are underway. I really see this core approach, or at least a smorgasbord-type approach, to what we have to offer to the public schools as being a step in the right direction.

But to get on with the assignment, as I view the impact of what has been happening here or has been reported here for the last couple of days. In the area of career analysis to identify required teacher competencies, I say that this is extremely good; this holds well for the future. We preach this kind of thing to our students and tell them that "Now, when you are in a teaching situation, your first step will be to make an analysis of the occupation for which you are preparing students." Yet I am rather convinced that in many of our vocational education programs we fail to practice the same concept. I can only say that if all teacher education curricula were based on the career analysis approach, we would see tremendous improvement and it would be rather immediate. I predict that when the reports of this project are more widely distributed, many vocational teacher education departments such as ours will move to revise curricula on the basis of identified teacher competency requirements, and this can only mean progress in my estimation.

Second, with reference to the identification of performance-based objectives. Now, if I were to attempt to review the present situation, I would have to say that many of our courses are loosely planned and conducted. And, I rather suspect, the lecture type, in some instances. I am sure that the instructional time required to do the job in the courses that we now have in operation could be greatly lessened, and added emphasis could be placed on the critical areas which are now too oftentimes omitted, if we really planned our courses around performance-based objectives. Performance-based objectives, in my opinion, make teacher education defensible. I predict that this is going to be done extensively, but I do not anticipate it being overnight. As a matter of fact, I don't think it should be done overnight. I think it should be done rather carefully, so that when it comes about, we will have much more functionable course work in vocational teacher education.

Another outcome, as I see it, will be in the area of evaluation of our vocational teacher education programs. I think that this evaluation will become more product-oriented as opposed to the process orientation now in vogue. When required teacher

competencies are identified and performance objectives are spelled out, evaluation will become more realistic if we are to remain in business. I think this is good, and it lays the background for making programs accountable for the money that is being spent in vocational teacher education and the input that it makes to the ongoing vocational teacher education. The work that has been done here this week will contribute to that.

Another area that I see is improving contributions between various people in vocational teacher education. When we accept the existence of commonalities between various services, we can sit down together and communicate about our programs. And this we must do, not only as friends, which we are, but as professionals who are about to give and take and understand the point of view being expressed by the other person, who is just as concerned with his area of service as you may be. I predict we will do this, and that better relationships between teacher educators will come about and improved programs will eventually result because of this working together.

Now, these points in general. I have said nothing about the implication of what has transpired here in terms of curriculum reform; and yet, I think there is much to be said here. You and I may not agree exactly on this, but I expect in the overall that we do. Frankly, I do not know what is in store for us in terms of curriculum reform. I personally think Colorado State University and the program there is somewhat of a unique situation that is different from some of us who are in a large college of education in which many of these things are being done by people of national and international recognition; and personally, we want to draw on that expertise and use it at every opportunity that we can. I do not know just how immediate will be the reform curriculum-wise in vocational teacher education, but I still don't hesitate to say that there is going to be much interest and, maybe step-by-step, much movement in this direction. And when it comes, and I think it will come, as the vocational education in the state changes, . . . Well, let me qualify. I think that vocational teacher education responds to the program. As the demands are made on us, we respond to it in preparing teachers for it. And, I think, as it changes, we will change; and the changes, curriculum-wise, will be in the area of education foundations. I think we all practice that now.

Occupational analysis--certainly there is no reason why three and four different service areas should be dealing with occupational analysis and calling it different names. We should be doing it in one effort and we should be doing the best possible job.

Coordination of cooperative programs is another productive area. We are already doing this, and I am certain that that is going to continue.

Educational media is another area in which we will have this move towards some kind of core effort.

Youth programs--preparation of leadership in this area certainly is a fertile area for change. All of this will be for the good, and I think it will come.

Now then, this change in curriculum reform, whether it is going to be core courses or core programs, and you understand that I view these as entirely different undertakings. I could look with favor on one under certain circumstances and with favor on another under other circumstances, as I have pointed out previously. I think that as we attempt to come up with some coordinated approach, I think that it will involve much staff study. We people in positions like mine are going to have to bear the brunt of this, I am certain. And we are going to have to ask our colleagues to sit down and to study this thing very carefully. I believe wholeheartedly in this listing of performance-oriented objectives. I think that we should be doing this in every course that we teach, regardless of whether we revise our overall program or not. I think we are all professionally obligated to do this. And again, if we are going to keep in tune with what is happening in the rest of the college of education, we are going to have to do this because they are devoted to that too. I'm afraid that someone mentioned this rather tactfully.

I do not know just what we will have to do about personnel to carry on, whether it means in-service programs or whether it means bringing in people who will take on these new responsibilities without resistance; but I am certain that there are going to be implications for personnel rearrangement or reorganization.

In the area of new course approvals, I understand that I am speaking to people of the same persuasion I am this morning. You understand this is the problem; you don't change courses overnight. You are talking about 18 months' undertakings or two years' program when you get a course approved in some of our institutions. Of course, we will bootleg them in, as you know how to do this. We have all these problems, numbers, and we will give them all these fancy numbers and fancy names and get the job done. Of course, it won't be in the catalog, I am sure, for some later time to come. But give us credit, we know how to operate in this and we will do it.

Now there are emerging programs coming into being in the public schools today and these, I am sure, will provide us an opportunity to begin to implement some of the things that we are

talking about here because these programs will reflect emphasis on teacher competency requirements.

Now you see, when you begin to undertake these six areas that we now have, agriculture, business, home economics, distributive education, and so on, and try to change them overnight, that it will take a little time. But now, as we are called on to do these new things that I referred to a little bit ago, I see this as a very fine opportunity for us to begin work immediately and set up these programs on that basis, and I certainly would look forward to this being done. Established programs may change slowly, but I predict demands for new courses to meet emerging program personnel needs will reflect the findings of this project; and these will include exploratory programs at all levels. And I differ a little here. I met with our guidance people before I came here and they want to put on some joint-staff people between a very good counseling department and vocational education. I see this as being done. Whether this is a core program between departments, I don't know. This multi-occupational pitch, or this cluster curriculum concept, or whatever you want to call it--we are moving into this and I see this as an area in which we can make much use of what has been talked about here this week, special programs in career development. We dealt rather carefully with this area of disadvantaged programs and we kind of skirted that issue; but this is an overwhelming type of thing in our state, and I don't really know what we are going to do with it. It will give us an opportunity to think more realistically about people to project and conduct programs in that area.

At the preservice level, I am still reserving judgment as to how far we will move overnight toward a core curriculum. I think we will do much with core courses, but maybe more slowly with the core program.

Now at the graduate level, and I think I have expressed my point of view rather specifically on this, I concur wholeheartedly with the idea that we are not preparing teachers at the graduate level. But I think that at the graduate level, certainly at the advanced level, we are preparing leadership in vocational education; and these people without any question should be trained with an across-the-board approach, assuming that they come to us with competency and expertise in a teaching area. I would think that at the graduate level we should come up with a core or comprehensive program. And in our institution we have attempted to do that. I predict much movement to more graduate course offerings to reflect core or the interdisciplinary approach. Now this makes sense, and I predict that the movement at the graduate level will probably be much more rapid than at the undergraduate level. I think that all of our courses at the present time are already on this basis, and we will have to do a little more thinking about the overall program.

Overall, I see the impact of this movement as a willingness to review and reassess the merit of current vocational teacher education programs and their components. I think this is overdue, and maybe this is going to make some of us think twice as to whether or not we are doing what is needed. I think that the next thing that is going to come out of this will be a move to make vocational teacher education more responsive to societal pressures. I see this, and I think that this is what we are saying here, that as the demands on the teacher change, we will respond by preparing teachers to meet that kind of situation.

THE IMPACT OF THE CORE TEACHER EDUCATION CURRICULA AS SEEN BY THE: TEACHER EDUCATOR

*BEVERLY CRABTREE**

Teacher educators in institutions with comprehensive vocational education programs and core courses have no doubt already felt the impact of the core curriculum, as personnel in the various service areas have interacted with resulting program revisions and course revisions. Typically, we have already established the fact that vocational teacher education programs have followed the role of being a specialized kind of program. Now, as teacher educators we must start thinking in terms of much broader concepts of vocational education; and as teacher educators this involves learning some new terminology so that we can talk the same language as our fellow vocational educators. This involves studying the other service areas. If we expect our students to move in the direction of being more knowledgeable of the other service areas, then we as teachers of teachers must also start doing so. This involves not only the cognitive area, but also affective areas, our own attitudes, our own willingness to cooperate. There is now, and I anticipate there will be, a continued need for specializing. It is not an "either/or" that we have been talking about the last three days, but we really are discussing how we can obtain the best blend, the best balance, the best mix between specialized and general vocational education. Certainly, if one service area supports the other, hopefully, vocational education can make a better impact than with separate service areas all going their own way and trying to rediscover America again. I don't see that the core teacher education curriculum should be threatening to the teacher educator. Certainly organizational changes and revisions in program offerings will result, but this should not be considered as threatening.

Now, in reaction in terms of the teaching career analysis. Regardless of the university organization for vocational-technical teacher education, the 10 categories, the 50 clusters, the 390 performance elements can provide valuable assistance to teacher

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*Dr. Crabtree is Associate Professor, Department of Practical Arts and Vocational-Technical Education at the University of Missouri, Columbia, Missouri.

educators as plans are made for courses and objectives are developed for these courses, whether they be across-the-board courses or whether they be specialized courses. This information, with the addition of other sources of information, can be most helpful in program planning. These performance clusters could be transferred into student behavioral objectives and included in a variety of vocational education courses. In other words, what I am saying here, this information, the teaching career analysis, is a blue print from which teacher educators can draw, and then we can tie this in with our general professional education courses at our own respective institutions. I think we have all proceeded long enough around the circle in trying to determine what is an effective teacher and too often we have tried to base such decisions on the global picture of a teacher. The result has been much contradictory research. I see this teaching career analysis moving away from the global approach and becoming very specific in terms of performance competencies and teacher behavior. Certainly this has implication for teacher preparation and teacher evaluation. These categories should not be equated with a specific course or specific courses. It should be, and it is up to the institutions and teacher educators how such performance elements can be included in the curriculum. As teacher educators we are challenged to put this teaching career analysis to the test and then come forth with suggestions in the form of additions or deletions. Personally, I would like to see some attitudinal objectives developed. Check this out and try it.

In summary, certainly a common core of knowledge in vocational education should be a part of the education for all teachers. How this is implemented will vary with the institutions. The degree to which this is emphasized will depend upon department objectives, the individual's career goals, and whether it is preservice or in-service. Hopefully, by looking critically at all the specialized courses, it will be possible to combine some courses and this should minimize duplication of course offerings. Thus, it should maximize the best use of the vocational-technical education faculty and certainly resources. And I think that the teaching career analysis can be a valuable resource in providing direction for this.

CONFERENCE IN REVIEW

*JAMES D. McCOMAS**

We have had some commonalities which have been researched and presented to us, and I suspect that we could all find fault with the research methodology and so on. One question that we might ask when we go to teachers and supervisors and ask them to identify those things that are common. We may really get a reflection of the status quo of what is now common in vocational education, rather than asking the real question of what ought to be. They are not always the same. But, you know the data are never all in; we never get all the final input that we want. So, I don't condemn anyone for these efforts. In fact, I think they are to be congratulated, because at least for the first time we have begun to get a better glimpse of what is. And I would defy you prior to this time to have told us what really existed. The thing that gripes me a little bit about any kind of alternative that we might think of in education is that it seems that we always want the very strict and rigorous research design and all the questions answered about the new alternative. Then when we start to ask the same kind of questions about the existing programs, that is off limits, you can't ask this kind of question. We've just had that kind of experience at our university with a pilot teacher program at the undergraduate level which is considerably different from the existing one. Everyone wanted to know how clean the data were and where we got these objectives and how about the research methodology. The people working with the program said, "You know, those are really good questions, and we would like to ask those same kinds of questions about your program and the new program, so we can make some comparisons." And you know, the faculty with the conventional program were very defensive about these kinds of questions being raised about their programs. So, I think we are going to have to quit being so defensive and expecting one kind of rigor for a new program and another set of standards for any of the existing programs that we have. That just isn't fair, and I hope that we will mature enough so that we are willing to expect the same kinds of questions to be asked about the kinds of things that we are doing.

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*Dr. McComas is Dean, College of Education, University of Tennessee, Knoxville, Tennessee.

One missing element from this conference, and I know it was intentional, but I would suggest that as we follow it up we better not forget that we have been talking about some things that are negotiable. I think our good friend George O'Kelley kept trying to remind us that some of these things had to be negotiated with the professional component of teacher education and they're not exclusively our prerogatives, and I don't know how you can really talk about the whole of the professional teacher education without taking in your comrades and ed. psych. and other dimensions, so it seems to me that this is the next logical step. I just hope that we haven't become so opinionated at this particular point about the components that we have been talking about in terms of professional vocational teacher education that we aren't willing to negotiate a little bit as we try to reconcile what that total package would be. And in this respect we get told some things sometimes that we don't like. I too, as the dean of a college of education, from a variety of sources. But, students from other disciplines all say, "You people in education preach one thing and practice another. You talk about individual differences and that individual differences are of vital importance in recognizing those within the context of the learner." If we really do believe in individualized learning and some emphasis on the individual, then we're going to have to quit assuming that everyone is equally ignorant and that they all start at zero. We're also going to have to be concerned, I think, more about identifying the competencies and caring less where they come from, whether they come from vocational teacher education or whether they come from guidance, or whether they come from psychology or sociology. The important thing is that they get them, not necessarily whether we as a college of education provide them or whether sociology provides them or whether it comes from components around the university. The important thing is, I think, that they get them.

We have an awful lot of course building going on around the universities regardless what the discipline is. Ralph Tyler made an important point at a conference we had on designing doctoral programs two or three years ago over at Manhattan, where he said, "You know, unfortunately, we keep looking into the curriculum and doing course building and people building, really because people get the idea that an education just isn't complete unless you have had my course or you've had Smith's course or Snarp's course, and the first thing you know we get into people and course building rather than program and experience building." And I think that you might be willing to admit that course building is not necessarily analogous to experience building. We would hope that it could be more so, but I am sure that this is not always the case.

Someone during this conference expressed the concern about mechanistic approaches to education and particularly to teaching.

I think this always ought to be of concern to those of us who are in education. I'm not really concerned about what machines and technology might do to man; I am really more concerned about what man might do to man through the use of these. We are really losing the capacity to give deserved compliments, to smile every once in awhile, and to communicate that we still have the capacity to love; and I think these are very important ingredients and I wouldn't want to see them lost. We've got to find a way to hang on to them. I would also say, on the other hand, that some of the most mechanistic teaching that we've had going on, and I've been a party to it, whether it is the problem-solving method where the student can almost anticipate the next step that you are going to put on the chalkboard, or whether it's a job analysis, or whatever the approach might be. So I would submit that we may have had rather mechanistic approaches to teaching because the student can anticipate what the next steps were and could outguess the teacher or at least can keep up with him. So, I think we've always got to be concerned about this.

I don't really know why we are concerned about measuring performance objectives or talking about behavioral objectives; you've been doing it for years. You've been making judgments about how our students are able to carry out a supervised practice, whether it's sewing or cooking or farming, or whether it's proficiency on a lathe. You have been looking at performance-type criteria. You also, whether you want to admit it or not, have been very much colored in the kind of grades you have given your students by the kinds of attitudes that they have demonstrated; and you would be less than honest if you didn't admit that the kind of attitudes that you saw reflected in your students were assessments about the affective domain. So, I don't know why we're threatened by it; and I don't know any group in education that has a better handle already prepared for them to start measuring outcomes in a much more precise way than you have. I know a lot more people who are going to be groping quite a bit more. We're on our way to being held accountable and to being asked to see how we measure up whether we like it or not. Those people here from Florida are probably more accutely aware of that than some of the rest of us. And California, you know, is feeling the bite. If you don't like the systems that are being developed, then you better have some input and help to develop a better kind of mousetrap that will reflect the kind of things that you want to see measured. But you aren't going to be able to hide. We in education aren't going to be able to hide and say we are, because we can't measure all these things very well. Then we are going to have to be excused from measuring anything. We are going to have to do the best job of measuring those things that are measurable. I think that we will become much more skilled in measuring the affective domain, for we can do much more about it.

I didn't hear very much mentioned in this conference about how the internship might be used more effectively in helping the person to develop in his area of expertise, whatever that may be. And we really haven't become as sophisticated in the use of this kind of experience as we should be. It certainly ought not to be putting the person back into the same kind of experience that he has had before. We can do a lot more with this kind of planned program in education than some of the accidental learnings that we have been given credit for in proficiency exams and accrediting of three years of industrial experience, putting a bolt on the left front of a bumper at a Ford assembly line, or what have you. I would submit that maybe three or four summers of a well-planned internship program might give that person in industry, for example, a much better kind of experience than the arbitrary number of years that we have been requiring. We can hardly defend that, I don't believe, the practice that we've had. The question that I think Henry Ten Pas was asking, and I think you heard him, was, "Are we in business for ourselves or are we in business for students, both those that we now have and those that we ought to be serving?" Well, I think that there are some analogies here. I hear a lot these days, and you do too, about student power, faculty power, and administrators trying to hold on to their power. And there's a lot that is being lost on the university campus because of overt concern about power, because in the process we are forgetting about program power and what we are there for and what the state is expecting of us. If we spend all of our time with a primary focus on what are our prerogatives and what are someone else's, I doubt that the youngsters and the adults, the under-educated adults that we ought to be serving, are ever going to be served.

Then, I think there's one thing that we have not yet learned to be comfortable with. We have become rather spoiled over the years. Many of us who have spent some time in vocational education have really changed our own life styles. While we don't probably have as much money as we would like to have and we don't have quite all the material goods that some would like to have, you will have to admit in a relative sense that today's teacher, today's educator, is able to live with fairly decent medical care, good clothing, reasonable kind of diets which would be available if we practiced all those things about nutrition that we know are good for us, and rather comfortable homes to live in. It could be, I think, that we may not be as sensitive to the needs of the have-not groups, which we have represented by the black, the poor, the Spanish-American, and others with multiple kinds of handicaps that society has visited upon them. And I think it is quite important that we accept the challenge that now faces us at this convention. And I dare say that there are not very many vocational programs that really feel comfortable in this area and that are ready to make the kind of contribution that today's society demands.

REACTION TO THE SEMINAR

A special note of thanks is due to the following seminar participants who gave of their time and energy in reacting to the seminar as a whole.

Edna B. Jones
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Appendix A

Seminar Program

NATIONAL VOCATIONAL-TECHNICAL TEACHER EDUCATION SEMINAR

November 1-4, 1970
Chase-Park Plaza Hotel
St. Louis, Missouri

SEMINAR PROGRAM

SUNDAY, NOVEMBER 1

4:00 - 8:00 p.m. REGISTRATION

8:30 GENERAL SESSION

WELCOME
A. J. Miller

ORGANIZATION OF THE SEMINAR
Edward T. Ferguson, Jr.

KEYNOTE ADDRESS

An Organizational Plan For The 70's

James McComas, Dean
College of Education
University of Tennessee

MONDAY, NOVEMBER 2

8:00 - 5:00 p.m. REGISTRATION

Daily Events--Presentations, Group and Panel Discussions
Chairman of the Day--A. J. Miller

9:00 - 9:15 a.m. Research and Development On Core and Specialized Curricula
Calvin J. Cotrell

9:15 - 10:00 Model Curricula
Marilyn Molnar, Charles Doty, Roger Wilson

10:00 - 10:30 COFFEE BREAK

10:30 - 11:30 Model Curricula (continued)
Shirley Chase, Calvin J. Cotrell, Anna Gorman, James Bennett

11:30 - 1:30 p.m. LUNCH

1:30 - 3:00 Discussion Sessions

CLARIFICATION OF THE MODEL CURRICULA

Group 1: Group Discussion Leader--James Bennett
Group 2: Group Discussion Leader--Marilyn Molnar
Group 3: Group Discussion Leader--Shirley Chase
Group 4: Group Discussion Leader--Charles Doty
Group 5: Group Discussion Leader--Anna Gorman
Group 6: Group Discussion Leader--Roger Wilson

3:00 - 3:30 COFFEE BREAK

3:30 - 5:00 Symposium Panel

REACTION TO THE MODEL CURRICULA

Panel Members: Harold Binkley, George O'Kelley, Robert Meisner, W. R. Miller, Henry Ten Pas

TUESDAY, NOVEMBER 3

Daily Events--Presentations, Panel Discussions and Work Sessions
Chairman of the Day--Calvin J. Cotrell

8:30 - 9:00 a.m. Objectives of the Core Curricula--Operational Vistas
Duane L. Blake

9:00 - 10:15 Panel Discussion and Reactions

OBJECTIVES OF THE CORE CURRICULA

Panel Members: Harold Binkley, George O'Kelley, Robert Meisner, W. R. Miller, Henry Ten Pas

10:15 - 10:45 COFFEE BREAK

10:45 - 12:00 Small Group Work Sessions

DISCUSSION AND REACTIONS--The Operational Vistas, and Objectives of Core Curricula

Discussion Leaders: James Bennett, Marilyn Molnar, Shirley Chase, Charles Doty, Anna Gorman, Roger Wilson

12:00 - 1:30 p.m. LUNCH

1:30 - 3:00 Symposium

TEACHING STRATEGIES FOR CORE TEACHER EDUCATION COURSES

Panel Members: Beverly Crabtree, Bernard Fagan, Edward Harris, James Hensel, John Rowe

3:00 - 3:30 COFFEE BREAK

3:30 - 4:30 Small Group Work Sessions

REACTION TO THE SYMPOSIUM AND DEVELOPMENT OF ADDITIONAL TEACHING STRATEGIES

Discussion Leaders: James Bennett, Marilyn Molnar, Shirley Chase, Charles Doty, Anna Gorman, Roger Wilson

WEDNESDAY, NOVEMBER 4

Daily Events--Presentations and Panel Discussions
Summary Chairman of the Day--Anna M. Gorman

9:00 - 10:15 a.m. The Impact of the Core Teacher Education Curricula as Seen by the: Researcher, Department Chairman, and Teacher Educator

Researcher: Calvin J. Cotrell
Department Chairman: George O'Kelley
Teacher Educator: Beverly Crabtree

10:15 - 11:15 CONFERENCE IN REVIEW

James McComas, Dean
College of Education
University of Tennessee

11:15 - 11:45 Reaction to the Conference
(Panel to be Selected at Conference)

Edna B. Jones, James R. Stratton, Carroll B. Coakley, Mary Elizabeth Milliken, Joyce J. Terrass

Appendix B

Seminar Staff

SEMINAR STAFF

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Appendix C

List Of Participants

FOURTH ANNUAL NATIONAL
VOCATIONAL-TECHNICAL TEACHER EDUCATION SEMINAR

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